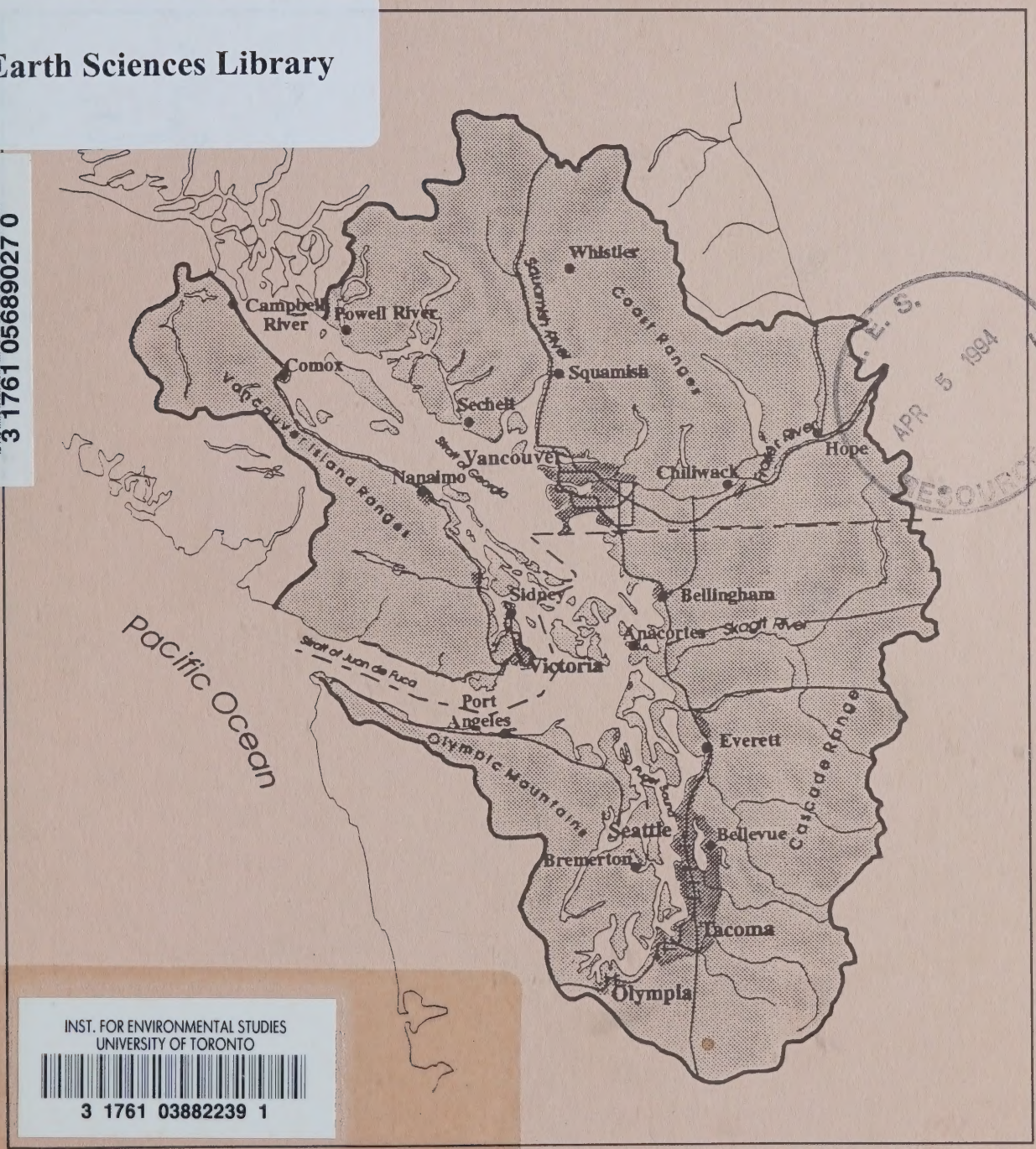
British Columbia Round Table on the Environment and the Economy

GEORGIA BASIN INITIATIVE

Creating a Sustainable Future



ADDENDUM TO THE REPORT

"GEORGIA BASIN INITIATIVE: CREATING A SUSTAINABLE FUTURE"

December, 1993

December 23, 1993

Premier Mike Harcourt
Parliament Buildings
Victoria, British Columbia
V8V 1X4

Dear Mr. Harcourt,

It is with pleasure that I present the B.C. Round Table's report *The Georgia Basin Initiative: Creating A Sustainable Future.*

This report represents the work and input of many participants from all sectors of the communities that make up the Georgia Basin. In this regard, the final report consists of the draft report released in June 1993, and an addendum which reflects the comments received.

The report fulfils part of the new mandate given to the Round Table by the Provincial Government in August of 1992. It reports on the results of the workshop on sustainability in the Georgia Basin held in Nanaimo earlier this year, and provides the government with information and advice on achieving sustainability in the Georgia Basin.

As you are aware, the Georgia Basin-Puget Sound region is experiencing significant environmental, economic and social pressures. Rapid population growth and low-density urban sprawl are threatening the quality of life and sustainability of the region.

The Round Table considers urban sprawl to be one of the most significant threats to sustainability in British Columbia. We urge you to take immediate action to contain and manage urban growth, and to ensure that planning is undertaken within the principles and objectives of sustainability for the basin as a whole. In that context, I am asking that you direct government to develop an action plan to address the report's recommendations, with immediate and urgent priority given to those recommendations concerned with urban containment, and integrated regional planning for growth.

Of particular and immediate concern to the Round Table is that urban sprawl and development is absorbing forest lands at an increasing rate. On eastern Vancouver Island, significant tracts of private forest lands are proposed for conversion to urban use. There is an urgent need to protect these lands, to maintain and support our valuable forest industry, and to provide communities with green spaces and recreational opportunities. We have proposed a forest land reserve as one mechanism to achieve this goal.

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The Round Table would be pleased to provide assistance and support to the Provincial Government in developing the Georgia Basin Initiative, and in implementing the recommendations contained in the attached report.

I look forward to discussing the report with you, and would appreciate an opportunity to make a presentation to the Planning Board of Cabinet.

Sincerely,

Joy Leach
Chair

Enclosures

cc: Hon. Glen Clark
Minister of Employment and Investment

Hon. Moe Sihota
Minister of Environment, Lands and Parks

ADDENDUM TO THE REPORT

"GEORGIA BASIN INITIATIVE - CREATING A SUSTAINABLE FUTURE"

BACKGROUND

In August, 1992, the B.C. Round Table was given a new mandate by the Provincial Government. Part of this new mandate was to engage in a consultative process to provide advice to government on how to manage the Georgia Basin as a whole, including ways of working with other levels of government - Canadian and American - to protect the quality of life in the basin. The Round Table was specifically requested to:

* provide advice to government on the state of the basin and proposals for policies to be pursued by the Province in cooperation with federal, state, local and regional governments in Canada and the United States; and

* facilitate consultation with the public and affected local governments both directly and by convening and reporting the results of a multilateral conference on basin issues.

As a first step in the consultation process leading to the Georgia Basin Initiative, the Round Table convened a workshop on sustainability in the Georgia Basin. The Round Table was requested to report back after this initial consultation with British Columbia stakeholders, with a summary of priority issues that the Provincial Government should focus on in developing the Georgia Basin Initiative.

A draft report on the results of the Georgia Basin workshop, and recommendations to the Provincial Government for the next steps in the Georgia Basin Initiative, was issued by the Round Table in June, 1993. Copies of the draft report were distributed to all those who had participated in the workshop, as well as to other interested parties. The Round Table invited comments on the report, and its recommendations.

PUBLIC RESPONSES TO THE DRAFT REPORT

A limited number of public responses to the draft Georgia Basin Initiative report were received by the Round Table. This reflects, in part, the extensive consultative and review process that took place during the initial drafting of the report. Proposed recommendations were circulated and discussed with the affected parties during the drafting of the report. Many of their comments and concerns were incorporated into the draft report prior to its formal distribution.

Written responses to the draft report were received from the following organizations:

* Boundary Bay Conservation Committee
* Greater Vancouver Regional District

* Ministry of Transportation and Highways
* Save Georgia Strait Alliance
* Vancouver Island Transportation Alternatives

The Vancouver Island Transportation Alternatives (VITA) characterized the report as an `excellent introduction to the issues', and emphasized the need for urgent action to address these issues. VITA expressed strong support for a coherent planning strategy for the Georgia Basin, and called for a moratorium on the proposed Vancouver Island Inland Freeway until a regional growth management strategy for the island was well underway.

The Save Georgia Strait Alliance (SGSA) was `encouraged' by the draft report, and felt that it correctly identified the major problems and challenges facing the Georgia Basin. Strong support was expressed for the future vision of the Georgia Basin outlined in Chapter 3 of the report. SGSA expressed some concerns that the report's recommendations did not go far enough in addressing the problems, and stressed the need for further public input to the process.

The Boundary Bay Conservation Committee (BBCC) also responded to the draft report, and suggested the provincial government demonstrate their commitment to the Georgia Basin Initiative by financing the completion of a drift card study to look at how pollution disperses in the Georgia Strait.

The provincial Ministry of Transportation and Highways felt that the draft report's recommendations were consistent with recent provincial direction, particularly in the area of multi-modal transportation planning. The Ministry expressed support for coordinated transportation and land-use planning, and for transportation planning links with Washington State, however noted that to carry out the coordinated planning contemplated by the report would require both a re-ordering of Ministry priorities, and additional resources.

The Greater Vancouver Regional District (GVRD) Board passed a resolution endorsing the draft report, and requested that the GVRD's *Creating Our Future* vision and reports be explicitly acknowledged in the final version of the Georgia Basin Initiative report.

Detailed comments on the draft report provided to the GVRD Board by their Strategic Planning Committee indicated that the recommendations were consistent with the environmental protection and growth management strategies outlined in the GVRD's *Livable Region Strategy*. The Committee expressed their support for the Georgia Basin Initiative as "a comprehensive framework for coordinating the actions of the many governmental jurisdictions responsible for managing the environment in the Georgia Strait - Puget Sound bioregion".

Summary of Public Responses

Overall, the public responses to the draft report can be characterized as very positive. The organizations that responded expressed strong support for the Georgia Basin Initiative, and for taking the steps necessary to sustain the quality of life and natural environment of the region.

A sense of urgency was underlined in many of the comments received, emphasizing the need for immediate action on the part of government to address the issues that are threatening the region's sustainability.

In addition to the general comments, the Round Table received a small number of suggested revisions to specific recommendations contained in the draft report. Many of those suggested changes have been incorporated into the additional text and revised recommendations presented below.

REVISIONS TO THE GEORGIA BASIN INITIATIVE REPORT

Rather than reprint the entire report to incorporate the suggested revisions, the following has been prepared as an addendum to the original report of the *"Georgia Basin Initiative: Creating A Sustainable Future"*.* This addendum, together with the original report, presents the Round Table's final recommendations to the Provincial Government on the next steps for the Georgia Basin Initiative.

The revisions to the report text and final recommendations are based on the public responses, as well as the review process undertaken internally by the B.C. Round Table. The report and the accompanying addendum reflect a consensus by the Round Table on the actions that are required to manage and to protect the quality of life in the Georgia Basin for future generations.

CHAPTER 1 - *Introduction*

Chapter 1 of the Georgia Basin report contains 3 maps that illustrate the geographic boundaries of the Georgia Basin - Puget Sound region (Map 1 - page 2), its general biological and physical characteristics (Map 2 - page 4), and the transportation and trade routes within the region (Map 3 - page 5).

For all of the maps in the original report it was noted that both Quadra and Cortes Islands had inadvertently been omitted from the area designated as the Georgia Basin. The Ministry of Transportation and Highways also noted the absence of freight and passenger railroad links on the map illustrating transportation and trade routes within the region.

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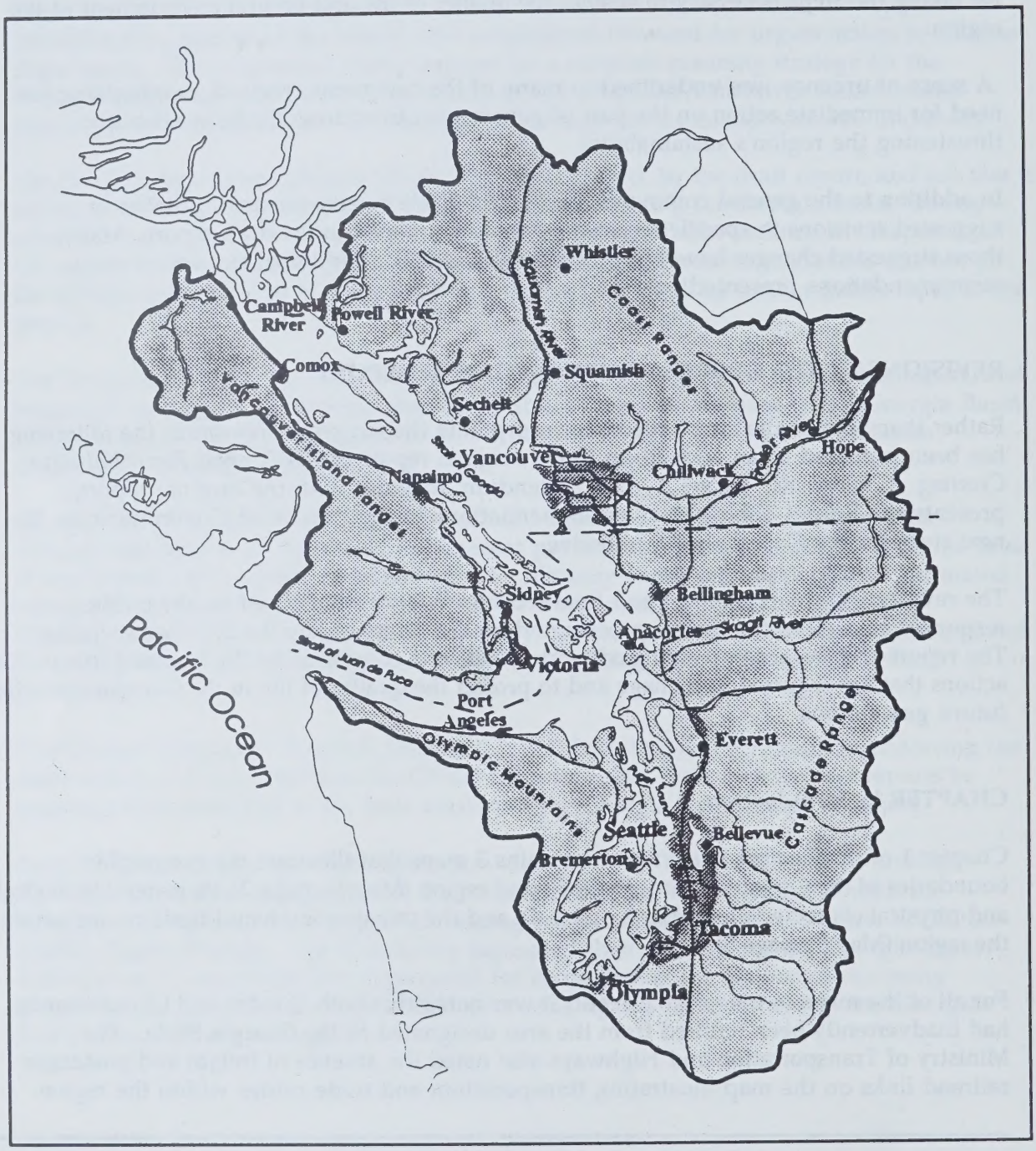
* Once supplies of the original report are exhausted, the addendum will be incorporated into the report, and a consolidated report issued.

Revised Map #3



To address these omissions, Map 3 has been revised to include Quadra and Cortes Islands, and to illustrate the railroad links within the Georgia Basin - Puget Sound region. The revised map is presented on page 4 of this addendum. Rather than incur the significant expense of recasting all of the report's maps, only the one map was corrected. The reader is therefore cautioned to keep the omission of these islands in mind when referring to other maps in the original report.

CHAPTER 3 - *A Vision For the Future*

Chapter 3 of the report presents a vision for a sustainable Georgia Basin of the future. The vision is adapted in part from a recent growth strategy and transportation plan developed for the Central Puget Sound region ("*Vision 2020 - Region at the Crossroads: The Preferred Choice*"), as well as the vision for a sustainable community contained in the B.C. Round Table's 1993 report "*Strategic Directions for Community Sustainability*".

During the review, it was noted that a number of communities within the Georgia Basin have recently completed community-based planning processes to focus residents attentions on local sustainability and growth management issues. These planning processes have generally included the development of a collective or `common' vision for the future of their communities.

The Greater Vancouver Regional District's (GVRD's) strategic planning process resulted in an action plan entitled "*Creating Our Future: Steps to a More Livable Region*". Adopted by the GVRD Board in 1990 and updated in 1993, *Creating Our Future* lays out 36 steps to maintaining liveability in the Greater Vancouver region, and includes principles, policies and actions to help achieve the District's goals. It creates a vision of "... a metropolitan region that combines economic vitality with the highest standards of livability and environmental quality".

Following the release of *Creating Our Future*, GVRD residents participated in a number of public conferences on how to achieve the goals and values set out for the future vision of their community. The GVRD has recently developed a *Livable Region Strategy*, a guide for land use and transportation development that outlines the steps that must be taken in order to accommodate one million more residents in the region over the next 30 years, while maintaining the region's quality of life and natural environment.

The City of Nanaimo has also recently developed a community-based strategic plan to define their community's goals and strategies for the future. Residents of Nanaimo were asked to "Imagine Nanaimo" in the year 2012, in order to develop a common vision of Nanaimo's future. The resulting vision defines their collective values and sets definite goals and strategies to create the kind of community the residents of Nanaimo want for themselves, their children, and their grandchildren.

Many of the collective values that have been defined in these community planning processes --- for example, planned and managed growth; reduction in dependence on the automobile; protection of the environment; community participation in decision-making -- parallel the community values and goals outlined in the Georgia Basin Initiative report's vision for the future of the Georgia Basin.

The Round Table acknowledges and supports these and other similar initiatives that are taking place within the basin's communities, and recognizes that they, in conjunction with the future vision set out in the original report, will provide valuable guidance and support in shaping a collective vision for a sustainable Georgia Basin.

CHAPTER 4 - *Shaping the Future: The Next Steps in the Georgia Basin Initiative*

Chapter 4 of the report presents recommendations for next steps in the Georgia Basin Initiative, based on the results of the Georgia Basin workshop, consultations with stakeholders, and the Round Table's mandate concerning the Georgia Basin Initiative. The recommendations involve both short term and long term action steps, with the priority placed on recommendations the Round Table feels are critical to achieving sustainability in the Georgia Basin.

The Round Table has developed seven principles that lay the foundation for achieving sustainability. These principles are outlined in Box 3 (page 15) of the original Georgia Basin Initiative report, and are discussed in detail in the Round Table's 1992 report "Towards a Strategy for Sustainability".

The principles of sustainability provide a set of guidelines which address environmental, economic, and social values, and the linkages between these values. The specific recommendations contained in the original report and this addendum have been formulated following a careful consideration of <u>all</u> of these values.

Recommendations

Revisions to the specific recommendations in Chapter 4 of the original report are presented below. For ease of reference, text from the original recommendation is shown in italics; revisions or additions to the original recommendation have been highlighted and underlined.

Recommendation 1 (revised)

> *The Round Table recommends that the Province of British Columbia immediately undertake a process that will consider and recommend new models of planning and governance for sustainability in the Georgia Basin. The process should ...*
>
> *b) be designed to result in final recommendations* **<u>by early 1995</u>**.

Discussion:

New models of planning and governance for sustainability in the Georgia Basin are urgently required. The Round Table recognizes, however, that this need for immediate action must be balanced against the need for adequate public consultation and input into the development of these new models.

New models of planning and governance will only be successful if the public understands and supports the need for these changes. Significant public participation and support must be elicited to ensure that the growth management strategies and a model of governance that can address the issues of sustainability will be achieved.

The Round Table felt that the timeframe proposed in the draft report (early 1994) would not have allowed for the level of public discussion and consultation that will be required to achieve success. Consequently, Recommendation 1 was revised to extend the timeframe for final recommendations to early 1995.

Recommendation 1A (new recommendation)

"**The Round Table recommends that the Province and local governments urgently address the issues of population growth and urban sprawl by seeking methods for defining and estimating community `carrying capacity' and by defining urban growth boundaries."**

Discussion:

As noted in the original report, the threats to the physical environment and native species of the Georgia Basin are all, in one way or another, a result of the region's rapid population growth, patterns of settlement, and our high level of material and resource consumption.

Urban settlement and development has sprawled into the basin's rural areas, resulting in the inefficient use of land, energy and other resources, increased infrastructure costs for roads, schools and other services, environmental degradation, and the conversion of agricultural, forest and other resource lands to urban development.

The Round Table believes that urgent action is required to control and manage urban sprawl in the Georgia Basin. Accordingly, the Round Table has recommended that immediate action be taken to set urban containment boundaries that will respect environmental carrying capacities, provide efficient and affordable infrastructure, and limit the intrusion of urban growth into agricultural, forest and environmental resource areas.

Recommendation 2 (revised)

The Round Table recommends that the Province of British Columbia **act immediately to require** *urban containment, residential intensification, and compact community development in the Georgia Basin by ...*

b) *developing provincial guidelines for urban settlement in the basin, building on experiences in B.C., Ontario, Washington and Oregon. The guidelines would provide basic direction for local land use planning and servicing, and would ...*

v) *ensure adequate transportation planning is undertaken to minimize* **automobile dependency** *and encourage walking, cycling, and the use of transit.*

c) **placing restrictions on the urbanization of private forest land within the Georgia Basin, and, at the same time, encouraging integrated use of capable forest lands until the proposed urban containment strategy is developed and the proposed land use strategy being developed by the Commission on Resources and Environment (CORE) is completed ;**

Discussion:

A strong sense of urgency was expressed by the participants at the Georgia Basin workshop, and by those who reviewed the draft report. Concern was expressed that the degree of urgency and the need for immediate action was not reflected in the draft report's recommendations. The Round Table concurs with this assessment, and has revised the wording of recommendation 2 to emphasize the need for immediate action on the part of the Provincial Government to contain urban sprawl.

Recommendation 2(b) has also been strengthened to ensure that the objectives of transportation planning include minimizing overall automobile traffic, rather than simply single occupancy vehicle use.

Recommendation 2(c) has been added to reflect the Round Table's increasing concern over the conversion of forest and other resource lands to urban land use.

The vision for the future of the Georgia Basin (detailed in the original report) provided for "cities in a sea of green" --- a series of high density urban centres separated by open spaces and greenbelts, comprised of forests, farmland, parks and recreation areas. Each urban community or cluster of communities would have a well-defined edge or buffer zone, permanently protected from development.

The proposed new models of governance and planning for sustainability that will move us toward this vision of the future will take several years to develop and fully implement. In the interim, decisions are being taken every day that jeopardize our ability to achieve that vision of the future.

While the conversion of agricultural land to urban land use in the Georgia Basin is restricted, primarily because of the Agricultural Land Reserve's role in preserving these lands, no similar protection exists for forest and other resource lands. Much of the basin's forest land is becoming more valuable as residential, and in some cases, industrial lands. Communities are under increasing pressure to permanently convert significant tracts of forest lands to urban use.

The Round Table feels there is an urgent need to protect and preserve forest lands, to maintain and support the forest industry, and to provide communities with valuable greenbelt and recreational areas.

Of particular and increasing concern to the Round Table is the rapid pace of development concentrated along the Island Highway on eastern Vancouver Island. A series of ad-hoc decisions are being taken concerning proposed development in and around communities along the highway, as well as major reconstruction of the highway itself. The Round Table's concern is that these decisions will permanently remove any opportunity to maintain an active forest economy and preserve forested greenbelts and buffer zones surrounding these communities.

Because of the urgency of the situation, the Round Table is proposing a pilot project, to develop a growth management and urban containment strategy for eastern Vancouver Island. The pilot project would be undertaken within existing governance structures and jurisdictions and would:

a) ensure that opportunities for working forests, green space, and recreational areas are preserved;

b) provide valuable information as to the jurisdictional and other changes that will be required to ensure the success of growth management strategies and regional governance in other areas of the basin;

c) serve as a model for recommendations to the Ministry of Municipal Affairs on new regional planning powers;

d) dovetail with and support CORE's current planning process, to ensure that land-use planning for Vancouver Island encompasses both urban and rural areas; and

e) heighten public awareness, understanding and acceptance of the need for urban containment and growth management strategies.

As an interim measure, the Round Table is recommending that the Province put in place significant disincentives for the removal of forest lands for non-forest uses, and encourage integrated resource management on those lands in order to maintain the greenspace and the associated economy. The Province should examine the potential for implementing a forest land reserve, similar to the ALR, to protect forest lands from conversion to other uses.

The window of opportunity to realize a vision of the basin's future that includes urban centres framed by open spaces, green belts, and recreational areas, is rapidly closing. The Round Table believes that immediate action must be taken to ensure that green spaces at the urban fringe are protected and preserved.

Recommendation 3 (new subsection (h))

The Round Table recommends that the Province of British Columbia demonstrate leadership in transportation planning and management by:

h) ensuring that the sustainability implications (environmental, economic and social) of major transportation projects are thoroughly assessed.

Discussion:

Some concern was expressed in the public review of Recommendation 3 that the while support for "providing road and highway improvements, where these are essential to support and enhance the economy of the Georgia Basin" may be justifiable on economic grounds, it may inadvertently lead to unchecked urban sprawl and development.

The Round Table shares this concern, and consequently has recommended that major transportation projects be thoroughly assessed to determine the environmental, social, as well as the economic impact on existing communities and the region as a whole.

Recommendation 6 (revised)

Recognizing the number and urgency of environmental issues facing the Georgia Basin, the Round Table recommends that it be mandated to organize and facilitate a public dialogue, with expert assistance, to set environmental goals and timetables for action in the Georgia Basin.

The public dialogue would be organized in cooperation with the Provincial Ministry of Environment, Lands, and Parks, and the Federal Department of the Environment, and Department of Fisheries and Oceans, and would involve the active participation of local governments, **non-governmental organizations, and residents of the Georgia Basin.**

Discussion:

Recommendation 6 of the report has been revised to ensure that the public, as well as the non-governmental organizations representing the various interests of the basin, are fully represented and play a proactive and meaningful role in the setting of environmental goals and timetables for action.

Recommendation 7A (new recommendation)

The Round Table recommends that senior governments review the strategies proposed by the Round Table in their report *A Sustainability Strategy for Energy* to promote energy conservation and efficiency, and the development and use of alternate energy sources in the Georgia Basin.

Discussion:

Conserving energy and using energy more efficiently are the cornerstones of any sustainable energy strategy. Energy efficiency is one of the most affordable and effective means of minimizing the environmental impacts of energy supply and use. As British Columbian's have one of the world's highest per capita energy consumption levels, there would appear to be significant potential to reduce future energy demands through efficiency and conservation measures.

The development of alternate energy sources, such as solar energy, wind energy, hydrogen fuels, and biomass energy, can also contribute to a cleaner environment for the future.

The Round Table's 1992 report, *A Sustainability Strategy for Energy* recommends a variety of energy efficiency and conservation strategies, and alternative energy technologies which the Round Table believes should be reviewed and considered in the context of achieving a sustainable Georgia Basin.

Recommendation 15 (revised)

The Ministry of Education should encourage and provide funding for schools, **other institutions, and community organizations** *within the Georgia Basin to develop curriculum units that reflect local issues and concerns related to the sustainability of the Georgia Basin.*

Discussion:

A variety of citizens' groups have developed, or are currently involved in the development of teaching and resource materials that reflect local issues and concerns related to the sustainability of the Georgia Basin. For example, the Save Georgia Strait

Alliance has recently published "*The Straitkeeper's Handbook: A Teacher's Guide to Discovering the Ecology of Georgia Strait*"; other non-governmental organizations have also developed similar curriculum materials.

The Round Table supports these initiatives, and has recommended that funding and support for the development of curriculum units be extended to other institutions and community organizations.

Map 5 - Georgia Basin With and Without Regional Management

Map 5 (on page 31 of the original report) generated substantial interest and many questions. The map presents the scale and pattern of potential urban sprawl in the Georgia Basin in the year 2050. It shows areas likely to be urbanized if effective regional growth management is instituted under one or more of the new models described in the original report. The extent of managed growth is contrasted with the sprawl that could occur in the absence of new models of governance.

Map 5 was not based on detailed analysis and forecasts; that task awaits future phases of the Georgia Basin Initiative. Rather, the areas of sprawl were estimated on the basis of the development that has occurred in the past 50 years and expected increases in future growth rates. The unmanaged development pattern reflects generalized topographic limitations to urban growth and assumes that existing development densities would continue. The managed growth scenario assumes that substantial increases in urban residential densities will be required to house future populations.

BIBLIOGRAPHY - Additional References

British Columbia Round Table on the Environment and the Economy, 1992. "*A Sustainability Strategy for Energy*". 61 pgs.
Greater Vancouver Regional District, 1993. "*Creating Our Future: Steps to a More Livable Region*". 38 pgs.

Greater Vancouver Regional District, August 1993. "*Livable Region Strategy: Proposals*". 48 pgs.

"*The State of the Strait: Proceedings of a Conference on the Health of Georgia Strait, 1991*". Nanaimo, B.C. Save Georgia Strait Alliance. 230 pgs.

Thomas, Randy (1992). "*Saving the Strait, Saving Ourselves*". Revised edition. Save Georgia Strait Alliance. 50 pgs.

FINAL RECOMMENDATIONS

Recommendation 1

The Round Table recommends that the Province of British Columbia immediately undertake a process that will consider and recommend new models of planning and governance for sustainability in the Georgia Basin. This process should:

a) involve discussions with all levels of government (federal, provincial, regional, municipal), aboriginal communities, and the public;

b) be designed to result in final recommendations by early 1995;

c) be founded on the principle that new planning and governance systems will not increase costs or levels of government; and

d) recognize that the new models must integrate, at a regional level, transportation and comprehensive land-use planning.

Recommendation 2

The Round Table recommends that the Province of British Columbia act immediately to require urban containment, residential intensification, and compact community development in the Georgia Basin by:

a) implementing interim planning controls to limit urban sprawl, with priority given to the east coast of Vancouver Island and the upper Fraser Valley, both of which are experiencing rapid population growth;

b) developing provincial guidelines for urban settlement in the basin, building on experiences in B.C., Ontario, Washington and Oregon. The guidelines would provide basic direction for local land use planning and servicing, and would:

* focus urban development within existing communities;

* maintain large lot rural development in areas which are subject to development pressure;

* if necessary to develop outside of existing communities, ensure that new developments:

  i) avoid hazardous areas (eg. unstable slopes, flood prone areas);

  ii) avoid sensitive environments and productive resource areas;

iii) provide for a range of housing (including affordable housing), community services and employment opportunities;

iv) have an adequate water supply, and provide for waste management to the appropriate federal and provincial standards; and

v) ensure adequate transportation planning is undertaken to minimize automobile dependency and encourage walking, cycling, and the use of transit;

c) placing restrictions on the urbanization of private forest land within the Georgia Basin, and, at the same time, encouraging integrated use of capable forest lands until the proposed urban containment strategy is developed and the proposed land use strategy being developed by the Commission on Resources and Environment (CORE) is completed;

d) encouraging and supporting the development and redevelopment of model communities through legislation, technical and financial support. Priority could be given for discretionary grants under the Revenue Sharing Act or initiatives under the new B.C. 21 program to communities in the basin that actively pursue compact urban development based on the principles of sustainability (integrating environmental, social and economic considerations);

e) implementing the Commission on Housing Options recommendations where these support sustainable and compact community development and redevelopment.

Recommendation 3

The Round Table recommends that the Province of British Columbia demonstrate leadership in transportation planning and management by:

a) integrating existing transportation plans with those planning processes currently underway (eg. GVRD, CRD) to ensure the efficient movement of people and goods throughout the basin, and to destinations outside of the basin, integrating vehicle, ferry, rail and air transportation systems;

b) providing road and highway improvements where these are essential to support and enhance the economy of the Georgia Basin, with emphasis on access to port and airport gateways, but discourage (through demand management and access controls) single occupancy vehicle use of these improvements;

c) applying a full range of demand management measures to reduce the use of single occupancy vehicles for unnecessarily frequent short trips and for daily commuting;

d) supporting user pay, road pricing, and full-cost accounting principles for all transportation systems, recognizing the need to build into user pay schemes measures to mitigate economic hardship for low income residents;

e) shifting subsidies from private motor vehicles to encourage public transport;

f) reviewing the results of the Transport 2021 (GVRD/MOTH) and Transport 2010 (CRD/MOTH) projects and supporting those that support the principles of sustainability within the context of the Georgia Basin as a whole;

g) encouraging and supporting the development and redevelopment of communities designed to reduce the need for vehicle transportation; and

h) ensuring that the sustainability implications (environmental, economic and social) of major transportation projects are thoroughly assessed.

Recommendation 4

To ensure a proactive strategy for transportation planning and linkages with Washington State, the Round Table recommends that a bilateral mechanism similar to the B.C./Washington State Environmental Accord be developed to consider regional transportation issues such as ferry linkages, and transportation rail links between Seattle and Vancouver.

Recommendation 5

The Round Table recommends that the British Columbia/Washington State Environmental Cooperation Council continue the work being carried out under the Environmental Cooperation Agreement, as the Council provides a vital forum for regional cooperation on environmental issues.

Recommendation 6

Recognizing the number and urgency of environmental issues facing the Georgia Basin, the Round Table recommends that it be mandated to organize and facilitate a public dialogue, with expert assistance, to set environmental goals and timetables for action in the Georgia Basin.

The public dialogue would be organized in cooperation with the Provincial Ministry of Environment, Lands, and Parks, and the Federal Department of the Environment, and Department of Fisheries and Oceans, and would involve the active participation of local governments, non-governmental organizations, and residents of the Georgia Basin.

It is further recommended that Washington State environmental experts and public groups be included in the dialogue of issues, to assist with identifying bilateral issues, and to exchange information.

Recommendation 7

The Round Table recommends that the B.C. Energy Council be directed to review and provide input into transportation and land-use plans that are expected from the GVRD, CRD, and provincial government, to ensure these plans promote energy conservation and efficiency, and thereby reduce energy consumption.

Recommendation 7A

The Round Table recommends that senior governments review the strategies proposed by the Round Table in their report *A Sustainability Strategy for Energy* to promote energy conservation and efficiency, and the development and use of alternate energy sources in the Georgia Basin.

Recommendation 8

Bilateral coordination of energy planning and conservation should be undertaken through the British Columbia/Washington State Energy Cooperation Agreement.

Recommendation 9

The Round Table recommends that the provincial government consider the strategies proposed in the discussion paper, *An Economic Framework for Sustainability* as potential models for dispersing economic benefits from within the Georgia Basin to outlying areas of the province.

Recommendation 10

The Round Table recommends that the government continue to use existing bilateral mechanism (eg. PNWER, PNEP) to facilitate economic cooperation, and recommends these mechanisms be expanded as new joint trade and development opportunities arise.

Recommendation 11

The Round Table recommends that steps be taken within the existing legislative framework to strengthen social planning, by clearly defining and incorporating a mandate for considering social factors in local planning for growth and development, and improving opportunities for public participation in the planning process.

Recommendation 12

The Round Table recommends that until there is an infrastructure in place to integrate social planning, the Provincial Government, Regional Districts, municipalities and community services sector develop a coordinated approach to regional social planning in the Georgia Basin.

Recommendation 13

The Province of British Columbia, in consultation with the Round Table and other stakeholders, should plan and execute a multi-faceted public awareness and education program designed to:

* heighten the public's awareness that environmental, economic, and social pressures are threatening the quality of life and sustainability of the Georgia Basin, and that immediate action is required;

* outline a vision of a sustainable Georgia Basin of the future:

* inform residents of the Georgia Basin Initiative, and solicit public involvement in developing and implementing strategies to achieve a sustainable Georgia Basin;

* explain and illustrate the principles of sustainability, and the interdependence of the environment, economy, and social well-being, and heighten understanding in the importance of sustainability to our vision of the basin's future;

* broaden community understanding of the need for growth management strategies and a governance model that can address issues of sustainability, and generate sufficient public input and support to ensure that the objectives of the model will be achieved;

* increase public participation in planning and decision-making on managing for sustainability.

Recommendation 14

The Round Table recommends that the provincial government sponsor a joint forum with Washington State to:

a) build public and community support for the Georgia Basin Initiative;

b) identify issues that require bilateral cooperation; and

c) build and seek consensus on the future vision of the Georgia Basin.

Recommendation 15

The Ministry of Education should encourage and provide funding for schools, other institutions, and community organizations within the Georgia Basin to develop curriculum units that reflect local issues and concerns related to the sustainability of the Georgia Basin.

Recommendation 16

The Round Table recommends that one provincial government ministry or agency be assigned lead responsibility for coordinating the implementation of the recommendations contained in this report.

Recommendation 17

The Round Table further recommends that ministries or agencies of the provincial government that are assigned responsibility for implementing specific recommendations, or coordinating the overall implementation of this report, be adequately resourced to carry out the tasks, including funding to ensure the appropriate stakeholder groups can participate in the process in a proactive and meaningful way.

PARTICIPANTS OF THE GEORGIA BASIN INITIATIVE WORKSHOP

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Ken Cameron
Regional District of Greater Vancouver (Facilitator)

Gordon Campbell
Regional District of Greater Vancouver/Vancouver (Mayor)

Caroline Canfield
Galiano Conservancy Association

John Cashore
Minister of Environment, Lands and Parks

Trevor Chandler
Landscope Consulting Corporation

Shawne Chang

Jim Connor
MacMillan Bloedel, Nanaimo Office

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Diane Cragg
Islands Trust

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Islands Trust

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Ian Downie

Bill C. Ellis
B.C. Hydro

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Kathy Fletcher
People for Puget Sound

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B.C. Energy Council

Julie Glover
B.C. Agricultural Land Commission

Wayne Gorrie
P.R.A. Manufacturing Ltd.

Bob Grant

Ron Hagan
Powell River Regional District

Greg Halsey-Brandt
City of Richmond (Mayor)/Fraser Basin Management Board

James Hansen
(Recorder)

Premier Mike Harcourt
Province of British Columbia

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Bob Harkins
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Jane Hawkrigg Enterprises Ltd./(Facilitator)

Cynthia Hawksworth
Islands Trust/(Facilitator)

Maureen Headley
B.C. Ferry Corporation

Peter Heap
Office of the Premier

George Heyman

Ann Hillyer
West Coast Environmental Law Association/B.C. Round Table

Bill Holdem
Nanaimo Regional District

Susan Holvenstot
Friends of Tsitika

Lynn Hunter
Member of Parliament, Saanich-Gulf Islands

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University of British Columbia

Debbie Ianson
Canadian Parks and Wilderness Society

Gibby Jacob
Squamish Nation

Keith Jardine
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Inger Kam

Erik Karlsen
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New Pacific Communications Ltd.

Terry Knight
Inuktun Services Ltd.

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Will Paulik

William Rees
University of British Columbia

Sheane Reid
Sunshine Coast Regional District

Frank Rhodes
British Columbia Ferry Corporation

John Rich
Squamish Nation

Ann Rowan
Simon Fraser University/(Recorder)

Kathy Sanderson
Canadian Federation of Independent Business

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City of Victoria (Mayor)

Wendy Turner
Fraser River Coalition

Rob Vaterlechner
Malaspina College/(Recorder)

Nicholas Vincent
Ministry of Transportation and Highways

Debra Vogt
Digital Resources

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B.C. Round Table (Staff)

George West
Alliance Tribal Council

Petra White
Malaspina College/(Recorder)

Bill Woodall
Fraser Cheam Regional District

Patricia Woodward
Fraser Basin Management Board

Monica Wosilius
(Recorder)

Ernie Yacub

David Zirnhelt
Minster of Economic Development, Small Business and Trade

Georgia Basin Initiative:

Creating a Sustainable Future

Prepared for the British Columbia Round Table
on the Environment and the Economy
May, 1993

Covering Memo

Re: "Planning for Our Future"
Draft report on the Next Steps for the Georgia Basin Initiative

In 1990 the Provincial Government established the British Columbia Round Table on the Environment and the Economy, with a mandate to develop a strategy for sustainable development in British Columbia, to propose better ways of resolving conflicts over the environment and the economy, and to increase public understanding of sustainable development issues.

In August of 1992, the B.C. Round Table was given a new mandate by the Provincial Government. Part of this new mandate was to engage in a consultative process to provide advice to government on how to manage the Georgia Basin as a whole, including ways of working with other levels of government - Canadian and American - to protect the quality of life in the basin. The Round Table was specifically requested to:

- provide advice to government on the state of the basin and proposals for policies to be pursued by the Province in cooperation with federal, state, local and regional governments in Canada and the United States; and

- facilitate consultation with the public and affected local governments both directly and by convening and reporting the results of a multilateral conference on basin issues.

As a first step in the consultation process, the Round Table convened a workshop on sustainability in the Georgia Basin. The purpose of this draft report is to present the results of the workshop, and to recommend to the provincial government next steps for the Georgia Basin Initiative.

As a commitment made at the workshop, the draft report is being sent to all those who participated in the workshop, as well as to other interested parties.

The Round Table invites your comments on this report and its recommendations. After considering your comments, the Round Table will present a final report and recommendations to the provincial government.

All comments must be received prior to July 12, 1993, in order to be considered. Comments may be forwarded in writing, or by phone. Please contact Doug MacLeod or Lee Doney at the Round Table toll free (in B.C.) at 1-800-665-7002, or (604) 387-5422.

I look forward to receiving your comments.

Joy Leach
Chair

PREFACE

" [The Georgia Basin is]... shaped like a great water bird arcing in flight to the northwest. Its body is Puget Sound, its wings are the Strait of Juan de Fuca and the great Fraser River, and its long, curving neck is the Strait of Georgia" (McCloskey 1986).

The Georgia Basin and Puget Sound form an ecological unit, ringed by the crest of the Olympic Mountains, Vancouver Island Ranges, the Coast Ranges and the Cascades. The inland sea stretches from Olympia in the south to Campbell River and Powell River in the north. This natural bioregion, protected by the bordering mountains from both the Pacific storms and the cold arctic winds, is an area of mists, coastal fogs and soft grey skies. The sandy beaches and sea swept rocky cliffs echo the cry of the gull, the cormorant, the heron, and the bald eagle. It is an echo that lingers in the minds of the people who visit and it is a cry of welcome to those who call the region their home.

Humans have depended on the bounty of the Georgia Basin - Puget Sound ecosystem for thousands of years. First Nation cultures were shaped by the plants, animals, and landscape indigenous to this area and modern society, too, relies on the natural wealth of the region.

Today, the native species and physical environment of this unique area are being threatened. The signs of stress are evident — air and water pollution, traffic congestion, the elimination of farmland, wetlands, and wildlife habitat, increasing rates of crime, poverty, and homelessness. All, in one way or another, are a result of the region's rapid population growth, pattern of settlement, and our high level of material and resource consumption. If current growth trends continue, the region's population of 5 million can be expected to double over the next 25 years. The major question facing the Georgia Basin is whether we can accommodate this growth without destroying the livability and natural environment of the region.

The B.C. Round Table on the Environment and Economy believes the key to our future quality of life is sustainability. Sustainability, simply stated, means being able to meet the needs of the present generation without compromising the ability of future generations to meet their needs. We have an obligation to ensure that as we shape and build the future of British Columbia, we do it in a way that benefits not only present British Columbians, but also succeeding generations.

We are at a crossroads. There is still time enough to shape the future of the Georgia Basin in a way that will sustain our quality of life - but we must act now. If we do not, the future of the basin will be decided for us, and for successive generations.

MAP 1


The Georgia Basin/Puget Sound Region
Whistler
Coast Ranges
Squamish River
Campbell River
Powell River
Comox
Squamish
Sechelt
Vancouver Island Ranges
Strait of Georgia
Vancouver
Nanaimo
Fraser River
Hope
Chilliwack
N
Bellingham
Sidney
Anacortes
Skagit River
Strait of Juan de Fuca
Victoria
Port Angeles
Pacific Ocean
Olympic Mountains
Everett
Puget Sound
Cascade Range
Seattle
Bellevue
Bremerton
Tacoma
Olympia
0
50
100
Kilometres

CHAPTER 1

Introduction

1.1 OVERVIEW OF THE GEORGIA BASIN - PUGET SOUND REGION

The Georgia Basin - Puget Sound region runs north-south along a coastal corridor, stretching from Campbell River and Powell River, B.C., in the north to Olympia, Washington in the south and stretches as far east as Hope, B.C. and the Cascade Mountain Range. In the heart of the region lie the Puget Sound and the Strait of Georgia (Map 1).

The peaks of Mt. Ranier, Mt. Baker, Garibaldi, and Black Tusk, narrow river canyons of the Squamish and the Skykomish, the floodplains of the Fraser and Skagit, and the terraced coastal lowlands of the Gulf and San Juan Islands are the characteristic landforms of the region. Narrow hills, box canyons, and countless bays and headlands provide shelter and habitat for a wide array of marine, terrestrial, and avian wildlife.

Salmon start their life cycle in the streams cascading though the deep mountain valleys to brackish inland seas, and run to the sea to mature in the open Pacific. Feeding on the salmon and other marine creatures, great marine mammals — whales, porpoises, and seals — thrive in the inland sea. In addition to the rich bird life of the region's forests and grasslands, millions of waterfowl and seabirds nest, feed, and rest in the deltas, estuaries, and coves of the Strait of Georgia and Puget Sound. More than 40 species of waterbirds stop in the Georgia Basin - Puget Sound on their annual migration along the Pacific flyway.

Dense coniferous forests cloak the mountain slopes, while the vegetation of the coastal lowlands — the Garry Oak/Arbutus ecosystem — is unique to North America (see Map 2).

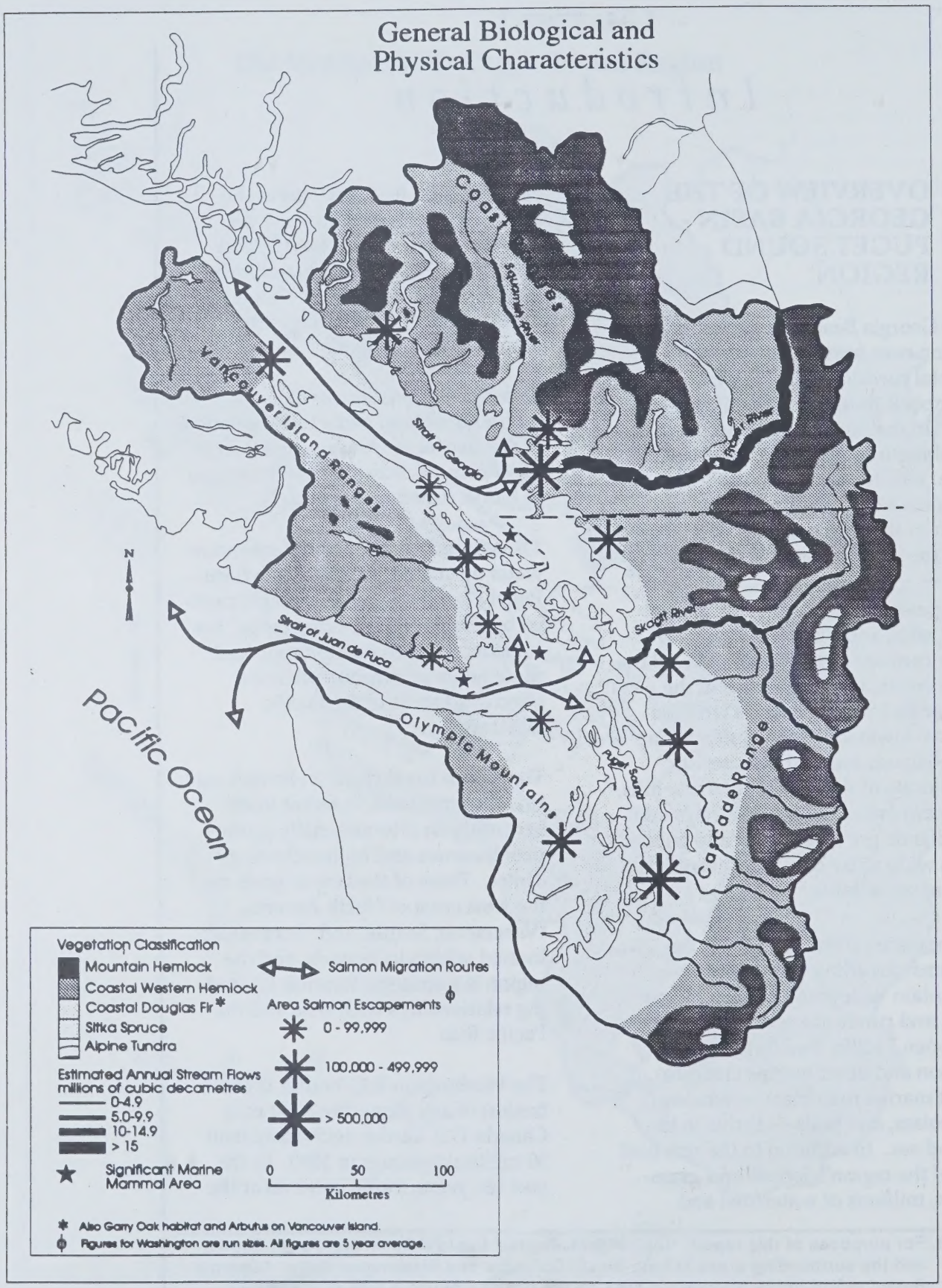
The spectacular terrain and extensive water resources of the Georgia Basin - Puget Sound Region are complemented by a mild climate - the region* has considerably less precipitation and more hours of sunshine than the windward areas of the Pacific Northwest.

The region has thrived on its rich natural resource base, in recent years becoming an internationally prominent business and high technology centre. Three of the largest ports on the west coast of North America (Vancouver, Seattle, and Tacoma) are located within its bounds, and the region is a strategic location for trading relationships with Asia and the Pacific Rim.

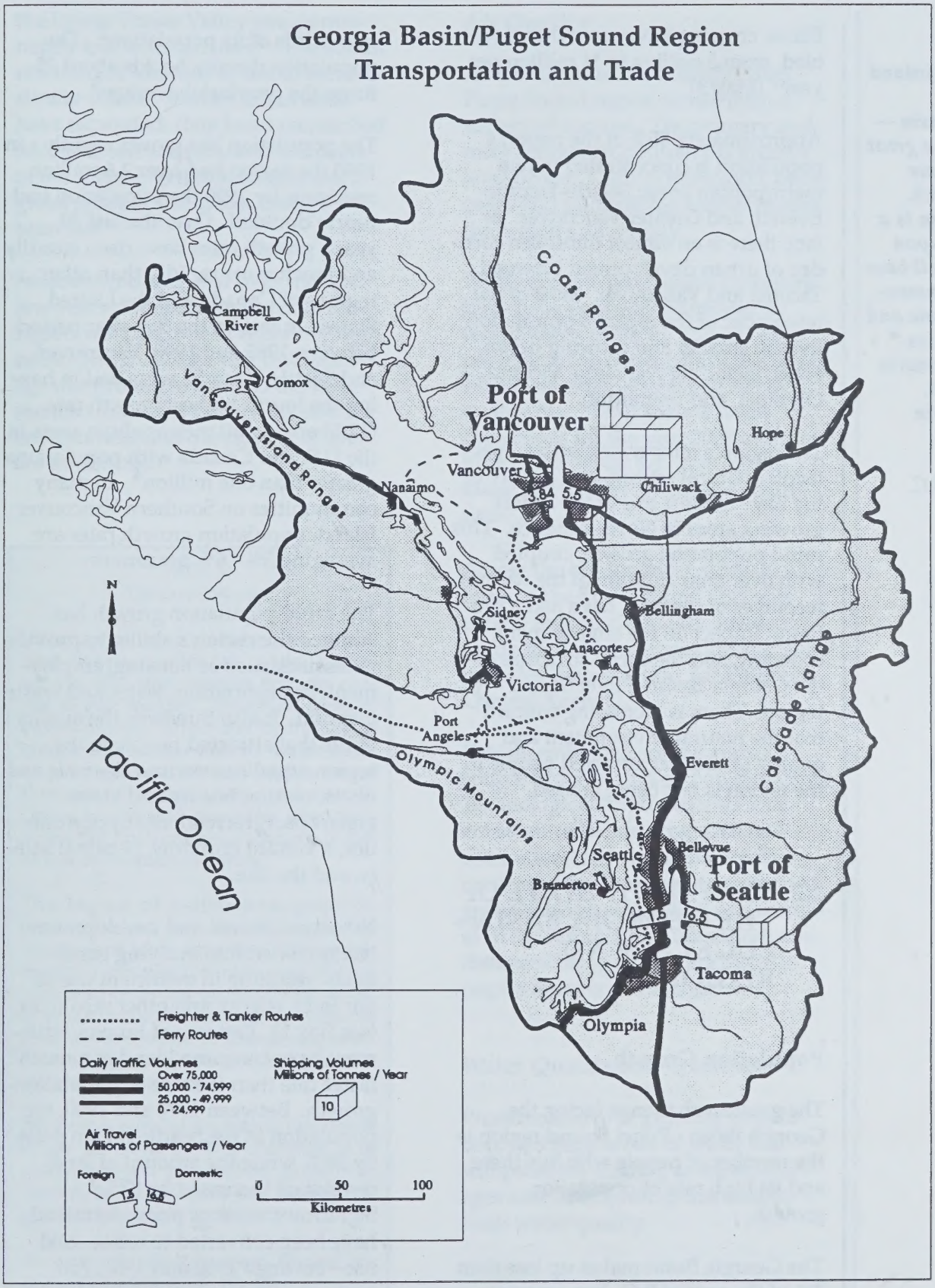
The Washington-B.C. border is the busiest of any along the 2,500 mile Canada-U.S. border, with more than 30 million crossings in 1990. In the past ten years, traffic volumes at the

* N.B.:For purposes of this report, "region" includes the Georgia Basin and Puget Sound, and the surrounding areas in both British Columbia and Washington State. "Georgia Basin" refers to the geographic area on the British Columbia side of the border, while "Puget Sound" refers to the Washington State side of the border.

MAP 2


General Biological and Physical Characteristics
Coast Range
Squamish River
Vancouver Island Ranges
Strait of Georgia
Fraser River
Skagit River
Strait of Juan de Fuca
Pacific Ocean
Olympic Mountains
Puget Sound
Cascade Range
N
Vegetation Classification
Mountain Hemlock
Coastal Western Hemlock
Coastal Douglas Fir *
Sitka Spruce
Alpine Tundra
Estimated Annual Stream Flows millions of cubic decametres
0-4.9
5.0-9.9
10-14.9
> 15
Significant Marine Mammal Area
Salmon Migration Routes
Area Salmon Escapements ϕ
0 - 99,999
100,000 - 499,999
> 500,000
0 50 100
Kilometres
* Also Garry Oak habitat and Arbutus on Vancouver Island.
ϕ Figures for Washington are run sizes. All figures are 5 year average.

MAP 3


Georgia Basin/Puget Sound Region
Transportation and Trade
Campbell River
Comox
Vancouver Island Ranges
Coast Ranges
Port of Vancouver
Vancouver
3.84
5.5
Hope
Chilliwack
Nanaimo
Sidney
Bellingham
Anacortes
Victoria
Port Angeles
Cascade Range
Pacific Ocean
Olympic Mountains
Everett
Seattle
Bellevue
Port of Seattle
Bremerton
16.5
Tacoma
Olympia
N
Freighter & Tanker Routes
Ferry Routes
Daily Traffic Volumes
Over 75,000
50,000 - 74,999
25,000 - 49,999
0 - 24,999
Shipping Volumes
Millions of Tonnes / Year
10
Air Travel
Millions of Passengers / Year
Foreign
Domestic
1.5
16.5
0
50
100
Kilometres

"The great inland sea of the Georgia Basin — not unlike a great lake — is our common link. ...this region is a bioregion upon which we all base our environmental, economic and social futures."
Opening Remarks by Joy Leach, Georgia Basin Initiative Workshop, Nanaimo, B.C.

Blaine crossing have more than doubled, from 5 million to 11 million per year[1] (Map 3).

Approximately 85% of the region's population is concentrated in two metropolitan areas; Seattle-Tacoma-Everett, and Greater Vancouver. In fact, there is an almost unbroken corridor of urban development between Tacoma and Vancouver. Most of the remainder of the region's population lives in smaller and growing urban areas, including Nanaimo, Victoria, Olympia, and Bremerton.

The region's temperate climate, spectacular natural setting, and quality of life have made it one of the fastest growing areas in North America. This rapid population growth, coupled with over-consumption of the natural resources of the area, have had a profound impact on the environment, economy, and the social structure of the Georgia Basin - Puget Sound region. There is increasing concern that the natural environment and quality of life that attracted people to the region is fast being eroded.

1.2 SNAPSHOT: STATE OF THE GEORGIA BASIN - PUGET SOUND REGION

Population Growth

The greatest challenge facing the Georgia Basin - Puget Sound region is the number of people who live there, and its high rate of population growth.

The Georgia Basin makes up less than 3% of the area of B.C., but contains two-thirds of its population[2]. The population density here is about 25 times the provincial average[3].

The population has grown rapidly - in 1960 the region had over 2.6 million residents; by 1990 the population had nearly doubled. Over the last 30 years, growth rates have risen steadily and much more rapidly than other regions of Canada and the United States. In fact, in the five year period between 1985 and 1990, Vancouver and Seattle/Tacoma were tied in having the fourth highest growth rate (12%) among all metropolitan areas in the U.S. and Canada with populations greater than one million[4]. In many communities on Southern Vancouver Island, population growth rates are averaging 5% - 6% per annum.

The rapid population growth has strained the region's ability to provide necessities such as housing, employment, transportation, water and waste disposal. It also threatens the quality of life that attracted people to the region - qualities such as clean air and water, natural beauty and vistas, green space, recreational opportunities, a vibrant economy, personal safety, and the like.

Urban settlement and development has sprawled into outlying rural lands, resulting in inefficient use of our land, energy and other resources (see Box 1). Patterns of human settlement have consumed land at a much faster rate than the rate of population growth. Between 1970 and 1990, the population in the Seattle region grew by 38%, while the amount of land developed increased by 87%[5]. Significant tracts of prime farmland have been converted to urban land use - between 1980 and 1987, 750 hectares of prime agricultural land in

the Lower Fraser Valley was permanently lost to urban uses[6]. The southern third of Vancouver Island faces similar threats. As the urban areas have expanded, they have encroached on the streams, rivers, and wetlands of the region. Wildlife habitat and green space at the urban fringe have been lost.

Forecasts indicate that over the next few years population growth in the region will continue at relatively high rates. The challenge will be to manage our urban growth and development so that its effects on the natural environment and our quality of life are minimized.

Box 1
Urban Sprawl

Urban sprawl is an inefficient use of land and diverts capital for roads, parks, schools, and other services from city centres to their margins. Increased areas of pavement can affect the hydrology of ground and surface waters. Water quality, plant species, fish and wildlife are all threatened by pollution from runoff. Urban sprawl also generates long commutes that consume large amounts of fossil fuel and impact air quality.

The impact of settlements goes far beyond the land area actually covered by housing and other amenities. The people in settled areas require resources that are garnered from the surrounding lands, whether these are land-based products such as food, timber, minerals and energy, or whether they are land as a place for recreation and renewal.

We have a growing population that needs to live somewhere. The challenge is to either contain population growth or improve our planning so that the impacts of urban growth are minimized.

State of the Environment Report for British Columbia, 1993, pg. 62

Air Quality

Air pollution in the Georgia Basin - Puget Sound region comes from a variety of sources. The primary and most serious air pollutant is ground level ozone. Carbon monoxide, other gases and particulates further reduce the region's air quality.

While ground-level ozone concentrations have generally improved in recent years, there are still 100 days per year when some part of the Lower Mainland experiences only fair air quality due to high ozone levels. Projections for the year 2005 indicate high ozone levels will continue to cause fair to poor air quality conditions[7].

Across the border, most urbanized areas in the Puget Sound also now exceed federal air quality standards for ozone, carbon monoxide and small particles (Puget Sound Air Pollution Control Agency).

Vehicle emissions are the largest source of ozone and carbon monoxide. Technological improvements and emission-reducing programs will reduce levels of air pollutants from road vehicles, however the predicted growth in our population and increases in the number of automobiles and distances being driven are likely to negate or reverse these gains.

Water Quality and Quantity

Pressure from our growing population, and high levels of water consumption are leading to water shortages and deteriorating marine and fresh water quality.

Major water quality threats include pulp and paper effluent, municipal waste-water, ocean dumping of dredged material, spills and related environmental accidents. These threats include microbiological and toxic contamination, nutrients, and physical contaminants.

More than 300 outfalls discharge into the Georgia Basin. Many of the basin's communities have either no or minimal sewage treatment, and few measures in place to prevent toxic contaminants from entering the sewage system. One of the most prominent impacts of sewage discharge is the closure of shellfish harvesting areas due to bacterial contamination. The province's Ministry of Agriculture, Fisheries and Food estimates that over 60,000 hectares of shellfish growing area along the basin's coastline have been closed due to such contamination[8].

In Washington State, municipal sewage treatment facilities are a significant source of contamination to the Puget Sound. Shellfish harvesting has been restricted on thousands of acres of commercial shellfish beds[9].

The failure of septic systems, and stormwater runoff are also major sources of pollution. Pesticides, fertilizers and other chemical pollutants wash into the region's rivers and oceans, particularly during periods of heavy rain. Swimming beaches are often closed due to bacterial contamination. Coastal pulp and paper mills discharge effluent to marine waters. Wood fibres smother sea-bottom ecosystems and deplete oxygen levels in the water, and chemicals are released that are toxic to marine life. While major improvements have been made as a result of the construction of settling ponds and in-plant controls, contaminant levels are still of major concern[10].

Contaminants are found in high concentrations around the region's harbors, particularly in the vicinity of heavy commercial and industrial facilities. Common contaminants include zinc, copper, cadmium, lead, mercury, arsenic, and PCBs (poly-chlorinated biphenyls)[11].

About 63,000 barrels of oil are spilled annually into the Georgia and Juan de Fuca Straits, from recreational boats, commercial ships and land-based sources. While to date these have been "small" spills, Environment Canada predicts a major oil spill in the Georgia Strait within 20 years[12].

Groundwater contamination is also of concern, particularly in the Lower Fraser Valley. Nitrate concentrations in a number of local wells have risen beyond levels acceptable for drinking water. Manure application is suspected as the major source of nitrates, but the contribution from other sources such as chemical fertilizers and septic fields is not known[13].

Water shortages caused by increased growth, over-consumption, and below average precipitation rates have led to restrictions on residential water use in recent years. Population growth and economic expansion will only exacerbate supply shortages.

Waste Management

The region's land, air and water are nearing, or in some cases exceeding, their capacity to absorb the waste generated by its residents.

Despite some progress in waste reduction and recycling, British Columbians still generate more waste per capita than any other developed country - about three times the rate of Sweden. British Columbians are generating almost 2.2 kilograms of waste per person per day[14]. Only 2% of B.C.'s land is suitable for landfill use, and many of our existing landfills are at or near capacity.

Much of the total 110,000 tonnes of hazardous waste produced in the province is produced in the Greater Vancouver region. Although some of the waste is stored properly or recycled, significant amounts are disposed of through ordinary waste management processes: municipal sewer systems, storm drains, and landfills that often do not provide adequate environmental protection.

Agricultural Lands

The natural geography of the Georgia Basin - Puget Sound region restricts the area in which urban development can occur, placing increased pressure on agricultural lands. In order to protect the limited agricultural land, the Province created the Agricultural Land Reserve (ALR). Although the Agricultural Land Commission has played a significant role in preserving agricultural lands, the recent "State of the Environment Report for British Columbia" notes that urbanization appears to be chipping away at the ALR. Between 1973 and 1990, the ALR area in the districts which overlap the Georgia Basin declined by 8.5%, and other lands which remained within the ALR were permanently converted from farms to golf courses[15]. By contrast, the ALR declined by only 0.4% over the province as a whole (Provincial Agricultural Land Commission, 1990).

Conversion of agricultural lands to non-agricultural uses is occurring over the border as well - between 1982 and 1987, over 80,000 acres of farmland in the Puget Sound region were converted to other uses (U.S. Bureau of the Census).

Soils

Soil erosion (the wearing away of the land surface by running water, wind, ice or other agents) is a problem in many parts of the Georgia Basin - Puget Sound region. Soil erosion reduces the productivity of farmland, and increases the need for fertilizers and other chemicals. Off-farm damage includes siltation of rivers and streams which impairs the spawning and breeding grounds of fish and other aquatic life, and increases damage from flooding.

In some parts of the Georgia Basin, soils are contaminated with organic chemicals and heavy metals, most of it the result of industrial activities and waste dumping. The development of former industrial lands for residential or commercial use is hampered or precluded as a result of contaminated soils. Pollutants from these sites may also be leaching into the groundwater, rivers, and streams of the basin.

Biodiversity and Habitat Protection

The loss and alteration of distinct habitats and the resulting reduction in biodiversity constitute immediate threats to the environmental quality of the Georgia Basin - Puget Sound region. Many examples of habitat loss

can be cited. Urban development has reduced Canada's only Garry Oak - Arbutus community to remnants. Wetlands in British Columbia are routinely converted to farmland, transportation facilities, industrial uses, and residential development. In the Puget Sound area, nearly 60% of the coastal salt marsh wetlands have been lost, and in some river basins, such as the Puyallup and Duwamish rivers, loss to industrial activity is almost total (Puget Sound Water Quality Authority). Logging has removed nearly all of the first growth forest from the region, and combined with urbanization and agricultural development, has greatly altered native wildlife habitat. The genetic and ecosystem diversity of the region, especially in isolated valleys and on islands, is threatened by human activities.

"... a city that greedily devours geography without turning it into any more productive use than bungalows on half-acre lots cannot afford an efficient transportation system. Sending buses and subways into modern suburbs is a recipe for bankruptcy, as many Canadian transit authorities have discovered."
Globe and Mail editorial, "The Canadian City: a sprawling mess" May 7/93

The region's fish have proven especially vulnerable to human activities - many populations of fish have been reduced to dangerously low levels. International tensions are increased by competition for fish by Americans and Canadians, to the detriment of scientific management of stocks.

Concerted action is needed to protect the ecosystem, species, and genetic diversity of the Georgia Basin - Puget Sound region. Pressures on natural systems are created by many sectors of society; the solutions must be just as broadly based.

Energy

British Columbians use about 20% more energy per person than the average Canadian, and about 300% more than the average Japanese[16]. Residents of Washington State also use considerably more energy per capita than the U.S. national average. Energy demands are expected to increase as the population of the Georgia Basin-Puget Sound region increases.

Hydro-electric reservoirs, transmission lines and pipelines are required to store and convey energy from where it's generated to where it's consumed. The land area required for utilities (eg. rights -of-way for transmission lines) impacts on the land, water, and wildlife, most often in regions far removed from the Georgia Basin.

While the energy extraction and conversion process often does not directly impact on the basin's residents, the consequences of energy consumption do. These consequences include air pollution from burning fossil fuels, greenhouse gases, rising global temperatures, acid deposition, and the high cost (economic, environmental, and social) of building increased generating and transmission capacity.

As British Columbians have one of the world's highest per capita energy consumption levels, there would appear to be significant potential to reduce future energy demands through efficiency and conservation measures. However, while energy conservation measures can reduce demand, conservation alone is unlikely to meet the future energy requirements of the region.

Transportation

The quest for mobility in the Georgia Basin - Puget Sound region consumes billions of dollars annually: airport expansions, increased ferry services,

rapid transit systems, highway and street improvements. Yet, despite these expenditures, roads are becoming increasingly congested, commuting takes longer, and air pollution is increasing.

Low-density urban sprawl, increased commuting distances, and the lack of an adequate public transit system have increased our dependence on the automobile. In the Greater Vancouver area, the number of cars insured for driving to work grew twice as fast as the population between 1984 and 1991. Only one-tenth of all passenger trips were by transit (Greater Vancouver Regional District).

Similar trends are evident in the State of Washington. Between 1961 and 1987 single occupancy vehicle travel increased from 58% to 69% of all trips in the Central Puget Sound Region. In the same period public transit's share of all trips decreased from 5% to 3% (Puget Sound Council of Governments).

Although public transit is generally accepted to be vital to solving our transportation problems, current population densities and dispersed development patterns reduce the ability of transit to provide viable and cost effective alternatives to the automobile (see Box 2).

Economy

The Georgia Basin plays a disproportionately significant role in the overall economy of British Columbia. Approximately three-quarters of the province's labour force reside within the region, and while the B.C. labour force grew by some 38% from 1971 to 1986, in the Georgia Basin the labour

Box 2

Mobility Facts in the Lower Mainland

- 1.3 billion person-trips were taken in cars in 1991 and the average trip length was 14 km. The average car occupancy on any given trip was 1.43 persons
- There are over 1 million cars in the Lower Mainland representing 1.5 cars per dwelling unit.
- 127 million person trips were made using public transit (bus, SeaBus, SkyTrain) in 1991. Over 82% of these trips were made by bus.
- The total cost of moving people in the Lower Mainland in 1991 was $13.6 billion. Private motor vehicles accounted for $11.7 billion or 86% of the total. Transit accounted for $1 billion or about 7.7 % of the total.
- Private motor vehicles were subsidized by $2.7 billion in 1991 in the Lower Mainland. This equates to $2600 per vehicle per year or $1.60 per litre of gas sold in the Lower Mainland (This is the amount by which private motoring costs would have to increase if the users were required to pay the full cost).
- Transit was subsidized by $360 million per year, or $2.85 per passenger trip, including direct provincial and municipal subsidies to BC Transit's operational budget.
- Accidents and associated damage were estimated at $2.8 billion, of which only $1.26 billion was paid through ICBC insurance. The remainder represents social costs.
- Pollution, in all forms, was estimated at $520 million; air pollution accounts for $430 million. These pollution costs are based on generally accepted North American research, but some European sources suggest that the costs of global warming may be significantly underestimated.

Transport 2021, The Cost of Transporting People in the B.C., Lower Mainland (Vancouver, 1993).

Current population densities and dispersed development patterns reduce the ability of transit to provide viable and cost effective alternatives to the automobile.

force grew by 57% (B.C. Regional Indices, 1987-1989).

The natural beauty of the Georgia Basin supports tourism and other traditional service industries. The two largest metropolitan centres - Vancouver and Victoria - contain the highest concentrations of service sector labour force. Services represent nearly 75% of employment in Vancouver and Victoria compared to 60% in the rest of the province[17]. However, even within the service sector, restructuring is occurring[18]. Approximately 25% of the service sector in B.C. are in the higher wage paying producer/dynamic services (e.g., biotechnology, computer software development, lawyers, consultants, etc.). Many of these dynamic service sector industries are servicing international, as well as domestic markets, and thus are becoming important wealth generators for the province. Not only are these industries strong wealth creators, they tend to place less stress on the natural environment than do the traditional natural resource-export industries.

The challenge to sustaining the basin's economic prosperity is to maximize income and employment benefits, while protecting and preserving the environment on which those benefits depend

Many emerging industries are drawn to the Georgia Basin because of its environmental qualities, quality of life, and opportunities for employees. Jobs and wealth generation in the basin are inextricably linked to the basin's environmental health and social well-being.

The basin's economic health is also affected by the systems of governance. The Science Council of British Columbia Strategic Planning for Applied Research Knowledge (SPARK) Oceans initiative is currently exploring the economic potential of a variety of ocean developments. Preliminary indications are that the development possibilities coast-wide are in the tens of billions of dollars.

The SPARK Oceans initiative has concluded, in part, that the confusion and uncertainties that arise from federal/provincial jurisdictional disputes, unclear mandates of multiple agencies, regulatory confusion and lack of vision all significantly hamper the sustainable development of ocean industries. The committee concluded that "potential ocean industry revenues in excess of $10 billion by the year 2000 are being put at risk by the evident lack of effective coordination of ocean activities"[19].

Economic growth in the Georgia Basin presents several additional challenges:

- The expansion of service sector employment has widened the gap in earnings between high and low income earners, increasing social inequity and eroding the standard of living of some of the region's residents;

- While the region is blessed with abundant natural resources, the sustainability of an economy based on those resources requires a strategy that balances their preservation, enhancement, and production. The challenge to sustaining the basin's economic prosperity is to maximize income and employment benefits, while protecting and preserving the environment on which those benefits depend;

- While the majority of communities in the Georgia Basin are experiencing strong growth in both employment and personal income, other parts of the province are suffering severe economic hardship. The economic benefits enjoyed by

communities in the basin need to be dispersed to other parts of the province.

Social Well-Being

Most residents of the Georgia Basin - Puget Sound region enjoy a high standard of living and quality of life, particularly in comparison to the rest of the world. However, poverty, changes in the labour market (including unemployment and the shift from resource to service sector employment), aging of the population, increased numbers of single parents, and changing ethnic composition are contributing to ever increasing social challenges.

- While employment and income growth in the region look strong, unemployment rates are predicted to remain relatively high, in part because of high rates of immigration from other regions. In addition, the per capita income rate is expected to remain flat, leading to increased numbers of residents requiring social assistance.

- According to the Vancouver School Board, "one in four Vancouver children live below the poverty line, and rent now consumes more than 50 percent of the income for almost 20,000 families. As a result, money for food is diverted for housing, and children are ... dependent upon food banks and other forms of social services" (Canadian Council for Inner City Education Newsletter).

- Rapid population growth has contributed to a shortage of suitable housing, and increased housing prices and rents. Between 1986 and 1990 the average selling price of a home in the Greater Vancouver area doubled. In Victoria, fewer than 7.5% of renters can afford to buy a home[20]. Similar trends have been experienced in the Seattle-Tacoma-Everett metropolitan area.

A significant percentage of current government expenditures are devoted to social programs, including health, education, justice and social welfare. The cost of providing these services is increasing, as the size and age of the population increases. Increased population growth means increased demands for employment, public and social services, which in turn places increased pressure on the economy and environment, and on our quality of life in the region.

Increased population growth means increased demands for employment, public and social services, which in turn places increased pressure on the economy and environment, and on our quality of life in the region.

1.3 CONCLUSIONS ON THE STATE OF THE GEORGIA BASIN - PUGET SOUND REGION

It is clear that significant environmental, economic, and social pressures are being exerted on the Georgia Basin - Puget Sound region. In many areas the natural environment and quality of life is deteriorating, primarily as a result of rapid population growth and human settlement patterns, and the over-consumption of natural resources by the region's population. The examples provided above indicate that the ability of our air, land and water to absorb the impact of human use has been severely strained, and cannot be sustained over the longer term. Fundamental changes are required.

1.4 A SUSTAINABLE FUTURE FOR THE GEORGIA BASIN - PUGET SOUND REGION

The future quality of life and sustainability of the Georgia Basin - Puget Sound region will depend on how we manage the region's environmental, economic and social resources.

Traditionally, the region has been approached and managed in a piecemeal fashion. Decisions made in one part of the region are made without regard for their impact on other parts of the region. Decisions are also made without adequate consideration of their long-term impacts, or the way in which we are limiting opportunities for the future residents of the region.

Dealing effectively with the challenges facing the region will require an "ecosystem" or sustainability approach to managing our activities. A sustainability approach holds that the economy, environment and social systems are interrelated, and that decisions made in one area affect all others.

The region's continued health and sustainability demands that we treat it as one system, not as a composite of separate and jurisdictionally distinct entities.

A sustainability approach:

- includes the whole system, not just parts of it;
- focuses on the interrelationships among the elements;
- understands that humans are part of nature, not separate from it;
- incorporates the concepts of carrying capacity and resilience and suggests that there are limits to human activity;
- uses a broad definition of environments - natural, physical, economic, social and cultural;
- is based on natural geographic units such as watersheds, rather than on political boundaries;
- embraces all levels of activity - local, regional, national, and international;
- emphasizes the importance of species other than humans and of generations other than the present;
- recognizes and seeks to reduce the human impact from this region on the global ecosystem; and
- is based on an ethic in which progress is measured by the quality, well-being, integrity and dignity it accords natural, social, and economic systems[21].

Unfortunately, the region is not organized in a way that facilitates this comprehensive approach. Numerous levels of governments, and hundreds of departments and agencies within those governments are responsible for managing the components of the ecosystems that comprise the Georgia Basin - Puget Sound region. The region's continued health and sustainability demands that we

treat it as one system, not as a composite of separate and jurisdictionally distinct entities. Major changes to the way in which we manage the region will be required to cut across traditional political and institutional boundaries.

Our quality of life in the Georgia Basin - Puget Sound depends on a variety of environmental, economic and social characteristics - employment opportunities, adequate and affordable housing, educational opportunities, access to health care, clean air and water, green space, and the like. Each of these characteristics depends on the health of the others; the economy depends on having a healthy and socially secure workforce, and an environment that attracts people and jobs to the region; our social well-being depends on having a sustainable economy to provide the infrastructure and economic benefits necessary to support our social system.

Decision making must begin to take into account the linkages between the environment, economy, and our social well-being, in order to understand how each affect, and are affected by each other (see Box 3).

Collectively we are responsible for ensuring that our activities contribute to the sustainability of the Georgia Basin. As residents of the basin we must ask:

- How sustainable are the economy, natural environment, and quality of life here?
- What are the correlations among population growth, economic and social trends, and future environmental quality?
- As the population of this area grows, will we be able to maintain the current quality of life, let alone improve it?
- How will trends in economic activities affect the use of materials and energy, and the production of pollution and wastes?
- What are the natural limits of the bioregion in supporting and tolerating human activities?[22]

Only by addressing these questions can we hope to achieve a sustainable future for the Georgia Basin - Puget Sound region.

Collectively we are responsible for ensuring that our activities contribute to the sustainability of the Georgia Basin.

Box 3
Principles of Sustainability

Sustainability can be defined as ensuring that our use of resources and the environment today does not damage the prospect of their being used by future generations. The Round Table has identified seven principles which lay the foundation for sustainability:

- Limit our impact on the living world to stay within its carrying capacity (its ability to renew itself from natural and human impacts).
- Preserve and protect the environment.
- Hold to a minimum the depletion of non-renewable resources.
- Promote long-term economic development that increases the benefits from a given stock of resources without drawing down on our stocks of environmental assets.
- Meet basic needs and aim for a fair distribution of the benefits and the costs of resource use and environmental protection.
- Provide a system of decision making and governance that is designed to address sustainability.
- Promote values that support sustainability.

CHAPTER 2

The Georgia Basin Initiative Workshop

As a first step in the consultation process leading to the Georgia Basin Initiative, the B.C. Round Table convened a workshop on sustainability in the Georgia Basin. This chapter of the report presents the results of the Georgia Basin workshop.

2.1 ORGANIZATION AND FUNCTION OF THE WORKSHOP

The Georgia Basin workshop took place on January 14th and 15th, 1993, in Nanaimo, B.C. The workshop brought together representatives of the federal, provincial, and local governments responsible for managing the issues affecting the Georgia Basin, as well as key representatives from industry, business, labour, aboriginal, social and environmental groups. Observers from the United States shared their views and experiences from a Washington State perspective. A list of conference participants is provided in Appendix 1.

The purpose of the workshop was to:

- raise public awareness and understanding of the sustainability challenges facing the region;
- identify overall issues, concerns, and opportunities; and
- develop suggestions on the logical next steps (both short term and long term) for the Georgia Basin Initiative and the roles that individuals, organizations and governments should play in resolving the problems we share.

Participants at the workshop focused on a number of issues critical to the sustainability of the Georgia Basin, including quality of life and environmental issues associated with urban growth, economic development, human settlement and transportation.

2.2 LIMITATIONS OF THE WORKSHOP

Although workshop participants identified and discussed a lengthy list of issues, concern was expressed that the list was incomplete. The Round Table tried to ensure a broad cross-section of perspectives was represented at the workshop, but some issues may have been missed or not accorded a high priority due to the absence of a respective stakeholder group. Perspectives that were not well represented at the workshop included those of the aboriginal communities and the telecommunications sector.

It should also be noted that the length and format of the workshop did not allow for comprehensive full group discussion about the relative priority of the issues identified by participants.

2.3 FINDINGS OF THE WORKSHOP

Despite the diversity of representation and of perspectives, a number of common issues and key themes

emerged concerning the sustainability of the Georgia Basin.

Georgia Basin is the Appropriate Planning Unit

Conference participants readily identified with the area described as the Georgia Basin. The Georgia Basin was deemed an appropriate planning unit for several reasons. The Georgia Basin is a bioregion that displays similar natural features, weather patterns, ocean currents, flora, and fauna. As a result of the rapid urban growth, the basin is rapidly merging into a single "megacity", with consequent pressures on a common land, air and marine environment. Although divided by various jurisdictional boundaries, these boundaries are artificial. Urban growth impacts and environmental concerns respect neither physical nor political boundaries.

"The Canada-United States border is a boundary invisible to the region's water, air, and wildlife."
Sound and Straits '92 Agreement

Jurisdictional boundaries are also losing relevance in the face of the rapidly growing communication, transportation, economic and environmental linkages. Areas in the basin are becoming increasingly connected and interdependent. The current trend to smaller planning units ignores these interlinkages and the impact that decisions made in one unit can have on others.

Need for Bilateral Cooperation

British Columbia and Washington State share the Georgia Basin - Puget Sound region, and the commons of that environment. The problems associated with growth in the region do not stop at the border. Waste discharged into the Strait of Georgia and Juan de Fuca Strait drifts south to Upper Puget Sound in Washington State; air pollution from industrial plants and automobiles in Washington State drifts north to B.C., and visa versa. Conference participants recognized that our transportation, economic and environmental issues are interrelated, and that we must work collectively with Washington State to manage the region.

Participants also recognized that there are opportunities for regional cooperation with Washington State. By working cooperatively, we can enhance our regional identity, more efficiently share the region's resources, and more effectively compete in the emerging global economy.

Basin's Sustainability Threatened

Widespread agreement was achieved around the notion that there are imminent threats to the sustainability of the Georgia Basin, and that without immediate action, the basin's quality of life cannot be maintained.

An extensive list of major themes, and of issues perceived as threatening the sustainability of the basin were identified in the various conference working groups. Box 4 lists the issues and themes summarized at the conference.

Time for Integrated Action

Participants expressed a strong desire to see immediate action taken to address the major issues. Further consultation or study of the issues represented a delay that most participants felt the basin could ill afford.

Despite the desire for action, many conference participants recognized the inter-linkages between issues in the basin, and complexity of the solutions. Participants were concerned that as governments and individuals we were not well-positioned to deal with these issues or their complexities.

For example, air quality is inextricably linked to transportation. Transportation includes public and private roads; public and privately owned railways; regional, national and international air carriers; ferries, freighters and other marine transport vessels; and the various public transit systems. Identifying and addressing transportation issues involves different levels of government, private individuals, Crown Corporations, regulators, and the public at large. Achieving progress requires complex, time-consuming consultation, negotiation, approval, and financing procedures. Participants acknowledged that such issues will not be easily or quickly resolved, but felt strongly that the consequences of inaction or maintaining the status quo would be much worse.

Box 4
Georgia Basin Workshop Major Issues and Themes

- Population Growth and Management
- Governance/Structure/Process
- Public Awareness and Education
- Integrating Transportation and Land Use
- Restoring and Protecting Natural Habitats and Biodiversity
- Managing the Transition to a Sustainable Economy
- Water Quality
- Waste Management
- Renewable Resource Management
- Economic Diversification and Sustainability
- Aboriginal Interests
- Air Quality
- Paying For Sustainability
- Diverse and Changing Values and Expectations
- Housing - Density and Affordability
- Containment of Urban Sprawl
- Demands for and Cost of Physical Infrastructures and Human Services
- Social Well-Being
- Environmental Standards, Monitoring & Enforcement
- Risk of Environmental Accidents
- Supply and Use of Energy
- Global Economic Changes
- Technology and Communications

Raising Public Awareness

A major priority identified by workshop participants was the need to raise public awareness about the issues facing the basin, and to educate and involve the public about strategies to achieve sustainability. Participants felt that many people lack the level of understanding and awareness required to make changes in personal behaviour, or to support the institutional changes required at a community level to achieve sustainability in the Georgia Basin. Education and information was seen as the key to changing public attitudes and behaviours.

Concern was expressed that the workshop was a "top-down" approach, and that it reached only those who were already aware of the issues, and aware of the urgent need to address those issues. The broader public must be engaged.

"There is consensus on the ingredients, but when you talk about the recipe, everyone goes in different directions."
Workshop participant, Group #1

Urban Containment and Growth Management

A consistent theme of the Nanaimo conference was the need to use our priceless land resource more effectively. In particular, the continued development of low density, automobile dependent communities was seen as a direct challenge to the sustainability of the Georgia Basin.

The continued development of low density, automobile dependent communities was seen as a direct challenge to the sustainability of the Georgia Basin.

Workshop participants felt strongly that if immediate action is not taken to contain and manage urban development, our opportunity to sustain the basin as a livable area will be forever lost.

Workshop participants called for the development of a regional growth management strategy that would encourage the development of compact communities, integrate planning (with short-term emphasis on integrated transportation and land-use planning), and conserve environmental resources. Social well-being (eg. affordable housing, employment opportunities, community stability) was also identified as necessary and legitimate in planning for sustainability.

Infrastructure costs (e.g. for sewers, water, roads, etc.) were also identified as an issue by many workshop participants. Participants realized that a strong urban containment strategy that increased densities would also increase the efficiency, and thereby lower infrastructure costs.

Participants called for an integrated approach across the region that would address and implement the required changes.

Environmental Impacts

Concerns covering a wide range of environmental issues were expressed during the workshop. The effects of encroaching urbanization were identified as the most significant environmental threat to the Georgia Basin. The concern for protecting and preserving the environment generated the strong desire for immediate action on urban containment and growth management. A strong urban containment strategy would help to preserve agricultural, forest, and environmental resource areas, and protect the region's varied wildlife.

Participants identified the need to restore and protect natural habitats and biodiversity, improve air and water quality, reduce and manage solid and liquid waste, and increase the areas devoted to parks and recreation. Concerns were expressed about tanker traffic and potential oil spill and nuclear safety. They called for greater expertise and understanding of environmental issues and their inter-linkages, increased monitoring and enforcement, and compliance with environmental treaties and agreements.

Comprehensive Transportation Planning

Conference participants concurred with the need to integrate transportation and land use planning. Comprehensive transportation planning (ie. planning which integrates environmental, social and economic concerns) was seen as key to solving environmental problems such as air quality, and as key to the economic well-being of communities within the basin.

Substantial tracts of land in the Georgia Basin are currently devoted to automobile use. Participants identified the need to integrate employment, cultural and recreational uses with residential development, in order to reduce land consumption and the number and length of automobile trips. A strong urban containment and growth management strategy was also seen as key to reducing the high costs of transportation.

Participants felt transportation planning should emphasize movement of people rather than automobiles, and that a range of alternatives, incentives and disincentives should be provided to encourage greater use of transit, and to reduce the need to commute long distances to work.

Aboriginal Treaty Issues

Workshop participants felt that timely resolution of aboriginal land claims and self-government issues was essential to the long term management and sustainability of the Georgia Basin. Participants recognized that the resolution of land claims could have a major impact on how the resources of the Georgia Basin will be allocated and managed in the future. As there is a province-wide initiative currently underway to address these issues they are not specifically dealt with in this report.

Social Well-Being

Participants at the Nanaimo workshop expressed concern about many social issues. As with environmental and economic issues, most social issues were related to urban population growth and the impact of that growth on the social well-being of the basin's residents. Major issues identified included poverty, unemployment, the lack of affordable housing, homelessness, increased exposure to crime and the loss of a sense of community.

Participants were concerned that social issues are not considered when governments make land use and development decisions, and felt that the public lack effective access to and participation in the decisions that affect the well-being of their communities.

Participants noted that our consumptive lifestyles are not sustainable, and emphasized the need to shift public values to recognize that quality of life should not be defined by material possessions, but by aspects of our physical and mental well-being.

Economic Development

Participants acknowledged that our quality of life and natural environment attract growth and employment to the region. Maintaining the basin's high quality of life was viewed as crucial, not only for the sake of its residents, but also to maintain our economic strength and comparative advantage.

Concern was also expressed that while, generally, communities in the Georgia Basin were experiencing economic prosperity, the economic benefits were not being dispersed to other regions. Concern was also expressed that the economic growth of the basin was taking place at the expense of other regions, within and outside of the basin.

Participants identified the need to integrate employment, cultural and recreational uses with residential development, in order to reduce land consumption and the number and length of automobile trips.

Current Governance Structures Not Working

While the Nanaimo workshop participants spent considerable time discussing specific issues (such as urban containment, public awareness and education, environmental protection and restoration, etc.), there was a clear consensus that all of these issues are interconnected, but existing governmental responses and institutions are not. Agencies responsible for protecting the environment and managing our resources are institutionally separated from those responsible for land-use planning. Those responsible for land-use planning are separated from those responsible for transportation. This fragmentation of authority renders it difficult to make comprehensive, sustainable decisions. One of the workshop participants summarized the problem as follows:

New and creative institutional frameworks, processes, and tools are needed if the Georgia Basin is to become a sustainable region.

- the agencies responsible are either not doing the job that is required or do not have the proper tools to do the job;
- the agencies responsible are not acting in an integrated fashion — they are acting in isolation; and
- not all of the "players" are adequately represented (eg. aboriginal communities; the public) - none of the agencies are inclusive enough to represent all the diverse interests they theoretically serve.

The result too often is duplication, inaction , or planning that is not consistent with the principles of sustainability. There is a feeling that the Georgia Basin is being over-governed and under-managed.

Participants noted that the public has become increasingly skeptical of the willingness or the ability of government to make the critical choices and decisions required to achieve sustainability. Local governments are often not mandated or accountable for land-use decisions which, in the longer term, are in the best interests of the region as a whole. Local governments are not required to consider broader, regional objectives in their policies or decision-making processes, nor are they required to consider the broader, and often harmful impacts of their decisions, such as increased traffic congestion or downwind air pollution.

In some cases, local governments simply lack the authority to deal with cross-jurisdictional issues affecting sustainability. As a result, critical growth management issues such as transportation, air quality, and environmental protection which exceed the jurisdiction of individual municipalities and regional districts are not managed effectively or efficiently.

Reorganizing the existing levels of government will not be enough. New and creative institutional frameworks, processes, and tools are needed if the Georgia Basin is to become a sustainable region. Only a restructured regionalism, based on the principles of sustainability, can provide the integrated and proactive approach that is required (see Box 5).

Box 5
Intractable Obstacles

Two of the most intractable obstacles in implementing an ecosystem approach - and to the economic and environmental regeneration it would provide - are rigidity of bureaucratic systems and fragmentation of jurisdictions. They combine to create a high degree of paralysis that pervades our systems of governance, and makes it difficult, if not impossible, to make sound, integrated decisions.

While it may now be considered trite to say that, if we want to improve the kind of decisions we make, we are going to have to change the way we make decisions, the fact is that the multi-disciplinary, cross-sectoral, and multi-jurisdictional nature of today's environmental and economic problems means cutting across disciplines, sectors, and jurisdictions. While still early in its existence the round table movement has already proven effective in bringing people together from diverse backgrounds so they can talk and find ways to overcome old antagonisms, using innovative forms of consensus decision-making. Other advisory bodies, commissions, and task forces can also act as agents of change and vehicles to overcome institutional rigidities. Such catalysts as round tables can be important in fostering partnerships across sectors, among institutions within sectors, and across jurisdictions.

Unfortunately, most of society is not organized in a way that facilitates this comprehensive approach. In Canada, for example, four levels of government have jurisdiction in the Toronto city region and more than 100 agencies exercise responsibility with little effective coordination among them. Indeed, in the past, the parochial pressures of bureaucracies and representative governments have almost compelled them to be unresponsive to cross-jurisdictional issues. When everyone is in charge, no one is in charge.

The result is bureaucratic and political paralysis - a situation in which almost any agency can stop projects, and no one can do anything. Because lines of accountability are completely distorted or hidden by this jurisdictional fragmentation, the citizen is left without any means of recourse. The implications for our democracy may be more crucial than we know. The jurisdictional gridlock throughout this region is the single biggest obstacle to environmental (and economic) regeneration. And this is not a problem unique to the Toronto city region.

The ecosystem approach, then, requires new institutional arrangements.

Royal Commission on the Future of Toronto's Waterfront, Regeneration, pp. 46 and 31

CHAPTER 3

A Vision for the Future

3.1 THE IMPORTANCE OF A VISION FOR THE GEORGIA BASIN

Chapters 1 and 2 of this report provide a "snapshot" of the current state of the Georgia Basin - Puget Sound region, and report on the results of the Georgia Basin Workshop. Both focus almost exclusively on issues and concerns, and the need to work together to create a sustainable future for the region.

In order to link individuals and private and public organizations together to create a sustainable Georgia Basin, a common vision of the future is required. This vision must be at the heart of the Georgia Basin Initiative.

The vision of the future should be positive and hopeful, but must recognize the urgency of the situation. It should inspire the people of the basin to action, and elicit public support for the significant changes in human activities and institutions that will be required to achieve a sustainable Georgia Basin.

Because we share the Georgia Basin - Puget Sound region with Washington State, the vision itself must be shared, not only by residents on our side of the border, but by our American neighbours as well.

3.2 DEFINING THE VISION FOR THE GEORGIA BASIN

The following attempts to define a vision for the Georgia Basin of the future[23].

Human activities in Georgia Basin of the future will be sustainable, based on a set of ethics and values that recognize and limit our impact on the basin's environment. The decisions we make, both individually and collectively, will balance environmental, economic, and social values.

In the Georgia Basin of the future, urban/rural boundaries have been set, to limit the intrusion of urban growth into agricultural, forest and environmental resource areas.

The basin's urban form is compact, with increased residential density. Residential communities contain a mixture of ages, cultures, incomes and abilities, and a mixture of housing and land use types. People living in higher density residential areas live within walking or cycling distance of jobs, transit, shopping, recreation and natural areas.

Urban centres and smaller outlying communities are framed by open spaces, greenbelts, and recreational areas. Within the urban centres, trees line the streets and plazas. Cities and towns are vibrant "people places", where cultural and artistic activities flourish, and personal safety on the streets is assured.

In order to link individuals and private and public organizations together to create a sustainable Georgia Basin, a common vision of the future is required

An extensive system of rapid transit vehicles speed people to work, school, and play. Other interconnected modes of transit — ferries, passenger rail, buses — move people and goods quickly and efficiently throughout the basin.

Neighbourhood character has been protected and promoted, and development controlled to prevent visual or physical barriers. Historic, visual, and cultural resources have been preserved, including views and landmarks.

Urban centres are linked by transportation corridors. An extensive system of rapid transit vehicles speed people to work, school, and play. Other interconnected modes of transit — ferries, passenger rail, buses — move people and goods quickly and efficiently throughout the basin.

Along transportation corridors, mixed land use immediately surrounds the transit stations. Neighbourhood development emphasizes integration of workplace and services with living space, such that residents can find the basic commercial, health, child care, recreational and other services they need within their neighbourhoods. For many, commuting to work involves walking or cycling, using the comprehensive network of paths. Pedestrian and bicycle facilities also improve access to transit locations.

A variety of traffic demand management initiatives, and incentives to encourage transit and car pooling and discourage single occupancy vehicle use are in place. As a result, per capita vehicle use is dropping, traffic congestion has been reduced and air quality improved. Mountain vistas once obscured by smog are again clearly visible on the horizon.

Pollution prevention has replaced the end-of-pipe waste management approach. Waste generation has been reduced, and useful materials recovered. Community and local industrial and commercial waste discharges meet or exceed regulatory requirements or standards. Water and energy conservation is being achieved through public information, incentive programs, and demand management measures.

The establishment of urban/rural boundaries has helped to preserve rural lands. Productive agricultural lands have been protected from conversion to non-agricultural uses. Viable areas of native vegetation have been preserved for the enjoyment of residents and wildlife. Wetlands are protected for their value as habitat, flood control, water quality and aesthetic amenities. Streams and lakes have been preserved and rehabilitated to improve their ability to sustain fish and wildlife, to perform their natural hydrological function, and to contribute to the quality of urban and rural landscapes.

A comfortable standard of living is shared by all residents of the Georgia Basin. Housing is available and affordable, income support is provided where needed, and services and facilities are available to support all residents to lead productive lives. Health services that emphasize wellness, rather than sickness, are available within the neighbourhood, with access to more advanced treatment when needed. The extensive rapid transit system ensures mobility and access to community and social facilities for all the basin's residents.

A wide variety of school and adult education programs provide the knowledge base, technical abilities and decision-making skills needed to support a sustainable society. School curricula furthers knowledge and understanding of sustainability, and

the integration of social, economic, and environmental well-being.

The economy of the Georgia Basin has remained vibrant and dynamic, although our expectations are guided by the need to use our environmental and natural resources sustainably.

The Georgia Basin is an active trading gateway based on resource and service exports, with a large and dynamic service sector. The benefits of the wealth created by this trade are distributed throughout the basin, and dispersed back into other areas of the province.

The basin's residents are actively engaged in meaningful and ongoing participation in the workforce. Unemployment rates have stabilized and dropped. Employment growth has been directed to existing centres, or dispersed to communities outside the basin. Local employment training, labour development and job placement programs are coordinated at the community level. A balance of jobs to housing in each part of the region provides opportunities for residents to live nearer to jobs.

Residents of the Georgia Basin contribute to the well-being of their community, and a strong sense of "community spirit" prevails. Citizens actively participate in the planning and implementation of community services, economic development, transportation, land-use development, environmental protection and other decisions that affect the well-being of their communities.

The economy of the Georgia Basin has remained vibrant and dynamic, although our expectations are guided by the need to use our environmental and natural resources sustainably.

CHAPTER 4

Shaping the Future: The Next Steps in the Georgia Basin Initiative

The following chapter presents recommendations for next steps in the Georgia Basin Initiative, based on the results of the Georgia Basin workshop, consultations with stakeholders, and the Round Table's mandate concerning the Georgia Basin Initiative.

The Round Table concurs with the view expressed by many Nanaimo workshop participants that "the time for action is now". The Round Table believes that there are a number of immediate action steps that can and should be taken to move toward a sustainable Georgia Basin. The Round Table is also aware of the risk of taking decisive action without the requisite level of public understanding and support. In some areas, further public consultation, education and research are required.

In this context, the recommendations that follow involve both short term and long term action steps. The focus is on recommendations that the Round Table feels are critical to building sustainability, in areas where there is a clear consensus on the need for action.

British Columbia Recommendations

The longer term recommendations focus on:

- developing strategies to plan for and manage the Georgia Basin in a sustainable fashion; and
- developing new institutional frameworks, processes, and tools (ie. governance) that will support sustainability.

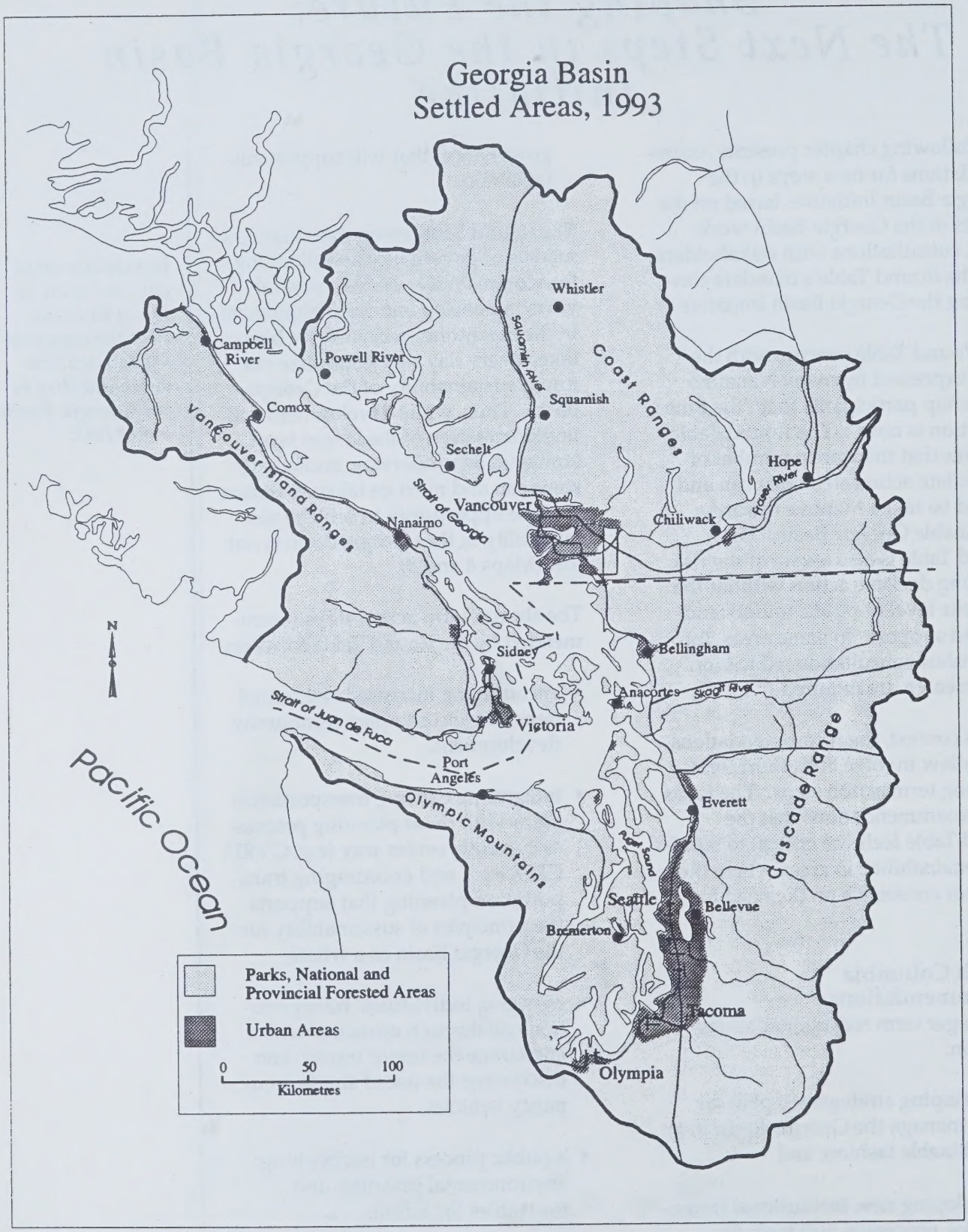
The Round Table recognizes that new models of governance and planning for sustainability will take several years to develop and fully implement. In the meantime, decisions are being taken every day that jeopardize the future sustainability of the Georgia Basin. Thus, while development and implementation of the longer term strategies are underway, immediate steps can and must be taken to ensure that the opportunity to achieve sustainability in the Georgia Basin is not lost (Maps 4 and 5).

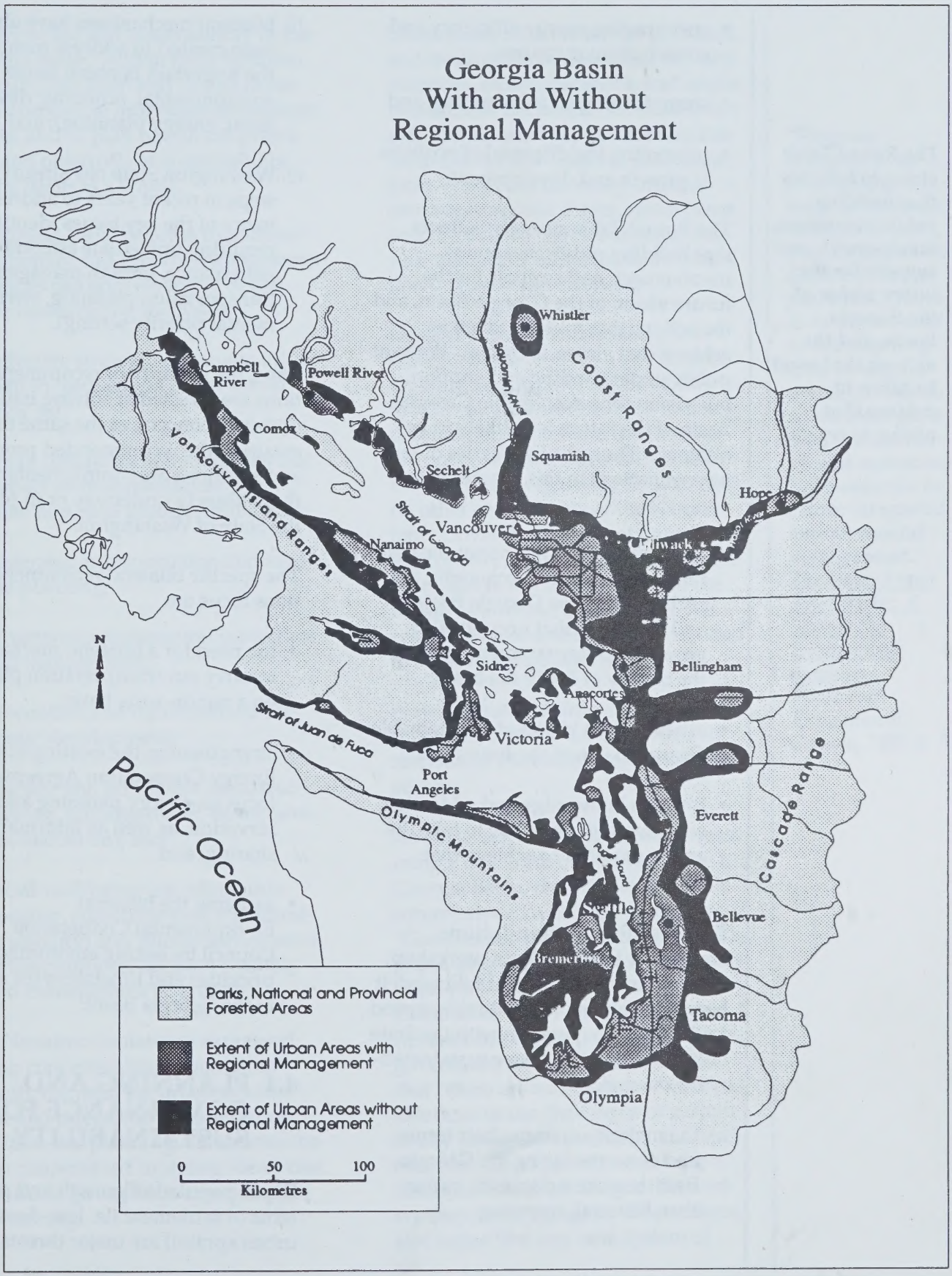
Immediate steps can and must be taken to ensure that the opportunity to achieve sustainability in the Georgia Basin is not lost.

The shorter term action steps recommended by the Round Table focus on:

- encouraging increased residential densities and compact community development;
- integrating existing transportation plans with those planning processes currently under way (e.g. GVRD, CRD, etc.), and encouraging transportation planning that supports the principles of sustainability for the Georgia Basin as a whole;
- changing individuals' transportation use through measures which encourage the use of transit, and discourage the use of single occupancy vehicles;
- a public process for establishing environmental priorities and timetables for action;

MAP 4


Georgia Basin
Settled Areas, 1993
Whistler
Campbell River
Powell River
Squamish River
Coast Ranges
Squamish
Comox
Vancouver Island Ranges
Sechelt
Hope
Fraser River
Strait of Georgia
Vancouver
Nanaimo
Chilliwack
N
Sidney
Bellingham
Anacortes
Skagit River
Strait of Juan de Fuca
Victoria
Cascade Range
Port Angeles
Everett
Olympic Mountains
Puget Sound
Pacific Ocean
Seattle
Bellevue
Bremerton
Tacoma
Olympia
Parks, National and Provincial Forested Areas
Urban Areas
0
50
100
Kilometres


Georgia Basin
With and Without
Regional Management
Whistler
Coast Ranges
Squamish River
Campbell River
Powell River
Comox
Vancouver Island Ranges
Sechelt
Squamish
Hope
Strait of Georgia
Vancouver
Nanaimo
Chilliwack
Fraser River
N
Sidney
Bellingham
Anacortes
Strait of Juan de Fuca
Victoria
Port Angeles
Pacific Ocean
Olympic Mountains
Puget Sound
Everett
Cascade Range
Seattle
Bellevue
Bremerton
Tacoma
Olympia
Parks, National and Provincial Forested Areas
Extent of Urban Areas with Regional Management
Extent of Urban Areas without Regional Management
0
50
100
Kilometres

The Round Table strongly believes that building public awareness, involvement, and support for the future vision of the Georgia Basin, and the actions that must be taken to achieve that vision, is crucial.

- encouraging energy efficiency and conservation measures;
- strengthening social planning; and
- promoting the dispersal of economic growth and development.

The Round Table strongly believes that building public awareness, involvement, and support for the future vision of the Georgia Basin, and the actions that must be taken to achieve that vision, is crucial. Without public understanding and support, our vision for a sustainable Georgia Basin of the future is unlikely to be attained. Thus, the final series of recommendations in this chapter focus on:

- informing the public about the current environmental, economic, and social state of the Georgia Basin, and the threat that uncontrolled growth and development pose to the quality of life in the basin;
- articulating a vision of a sustainable Georgia Basin of the future; and
- through knowledge and education, empowering the public to take the action required to achieve that vision.

Bilateral Recommendations

During the Georgia Basin workshop, and the consultations that followed, it became clear that while there is a need for bilateral cooperation with the State of Washington to achieve sustainability for the region:

a) the majority of immediate issues and concerns facing the Georgia Basin require a domestic, rather than bilateral, response;

b) bilateral mechanisms have already been created to address many of the important bilateral issues (eg. environmental, economic development, energy planning); and

c) Washington State has already taken steps in recent years to address many of the key issues identified as requiring immediate attention (eg. governance, growth management, transportation planning, environmental priority setting).

Thus, the majority of recommendations are directed at solving issues of domestic concern, at the same time ensuring the recommended processes and solutions are complementary to those already underway or in place in the State of Washington.

The specific bilateral recommendations focus on:

- the need for a bilateral mechanism to carry out transportation planning on a region-wide basis;
- strengthening the existing bilateral Energy Cooperation Agreement to focus on energy planning and conservation, as well as information sharing; and
- assisting the bilateral Environmental Cooperation Council by setting environmental priorities and timetables for action in the Georgia Basin.

4.1 PLANNING AND GOVERNANCE FOR SUSTAINABILITY

Rapid population growth and patterns of settlement (ie. low-density urban sprawl) are major threats to the

quality of life and sustainability of the Georgia Basin. Action must be taken to control the form and rate of urban development, to minimize its negative effects, and to plan within the principles and objectives of sustainability for the basin as a whole.

The Round Table believes that urban containment and growth management strategies can address many of the major issues facing the basin.

An effective strategy to manage urban growth in the Georgia Basin would provide for:

- urban containment boundaries that respect environmental carrying capacities, and protect rural lands;
- integrated transportation and land-use planning;
- proactive environmental protection and management;
- diversified and decentralized economic development;
- efficient and affordable infrastructure (eg. schools, roads, water, sewers, and so on); and
- social well-being (eg. affordable housing, accessible jobs, community stability) and public participation in the planning, decision-making and management of growth.

The Nanaimo conference expressed strong concerns about population growth, the need for urban containment and integrated transportation and land-use planning. Discussion on these concerns led to strong views that the current governance structures are not working.

Governance refers to all the processes and institutions by which society sets priorities, makes decisions, and implements those decisions. It includes not only the hierarchy of governments as we know them — federal, provincial, local — but also the many boards, commissions, task forces, committees and the like that carry out some decision-making or administrative function or advise governments.

Dealing with the issues facing the Georgia Basin requires a governance system that supports sustainability — the current system does not. Existing planning processes and institutions are not coordinated and decisions are made without regard for their impact on other components of the ecosystem. Governments do not have the appropriate authority or accountability to plan in the best interests of the region as a whole, and to make the critical choices and decisions required to achieve sustainability.

New institutional frameworks, processes, and tools are required to respond to the challenges of sustainability.

As a first step in the process of considering a new form of governance in the Georgia Basin, the B.C. Round Table commissioned a background paper on "Governance and Sustainability". The paper, prepared by Alan Artibise and Jessie Hill of U.B.C.'s School of Community and Regional Planning, summarizes the case for change in our governance structures and stresses that "there are no simple institutional solutions to the challenges of sustainability in the Georgia Basin: the institutional responses will need to be a match for the complexity of the society they serve" (page 8). The authors also argue that any new system of

"Progress towards a sustainable environment will require changes to current management institutions and practices... There is an urgent need to develop long-term strategies which cut across traditional political, institutional, and community boundaries to create integrated environmental management."
The Lower Fraser River Basin: A State of the Environment Synopsis Vancouver: Environment Canada, 1992. p. 9.

The best local planning does not add up to regional planning —- the interests are different.

governance must be assessed in terms of both "process" standards (democratic, jurisdictional, and geographic), and "substantive" standards (environmental, social, and economic). The paper provides questions to be applied to each model.

The focus of the Artibise and Hill paper, however, is a discussion of six different models of governance that are in operation in other jurisdictions or were suggested by workshop participants. The models outlined in the paper are attached as Appendix 2.

The State of Washington has already taken steps to address the issues of planning and governance for sustainability. Washington has recently passed both growth management and traffic demand legislation. The growth management law requires the state's fastest growing counties, and cities within those counties, to develop comprehensive land use plans that take into account environmental protection, infrastructure concurrency, state-wide economic development, affordable housing, transportation planning, and containment of urban sprawl. As well, local governments in the central Puget Sound region have created the Puget Sound Regional Council, to better manage issues on a regional basis.

Similar responses are required on this side of the border.

Recommendation 1

The Round Table recommends that the Province of B.C. immediately undertake a process that will consider and recommend new models of planning and governance for sustainability in the Georgia Basin. This process should:

a) involve discussions with all levels of government (federal, provincial, regional, municipal), aboriginal communities, and the public;

b) be designed to result in final recommendations by early 1994;

c) be founded on the principle that new planning and governance systems will not increase costs or levels of government; and

d) recognize that the new models must integrate, at a regional level, transportation and comprehensive land-use planning.

The Round Table is reluctant to recommend a new commission or body be created to develop the proposed new models of planning and governance for sustainability. The Round Table recognizes that there are existing processes and mechanisms underway with mandates that are complementary, and that may be able to be expanded to incorporate the tasks recommended in this and subsequent sections of this report. In particular, the Ministry of Municipal Affairs, Recreation, and Housing is undertaking a review of regional planning issues and mechanisms, and may be well positioned to take the lead for this initiative. The Round Table also has an overall mandate that is consistent with the proposed initiative, and has, to date, been the primary focal point for the Georgia Basin Initiative.

The Round Table believes that expanding the mandate of an existing body or process would lower the level of public concern and confusion over the number of processes currently underway, and their potential overlap and linkages. However, the possibility exists that the existing processes

are, for a variety of reasons, not appropriate or able to carry out the recommended tasks.

4.2 DEVELOPING COMPACT COMMUNITIES

Implementation of new governance models and planning which incorporates the principles of sustainability will, over the longer term, ensure that the Georgia Basin remains a thriving, livable region.

However, implementation of these longer term actions will, at best, take several years. In the interim, steps can be and must be taken to address the current state of the basin. In particular — and of immediate concern — is the need to limit urban sprawl and to encourage compact or "model" communities (see box 6). Bold steps in the area of urban containment can have a major impact on the detrimental consequences of sprawl: traffic congestion, declining transit ridership, increasing infrastructure costs, social isolation, environmental deterioration, disappearance of prime agricultural and other resource lands, and so on.

The Round Table has identified the following key areas where interim action should be taken:

A) Existing Regional Planning Processes

The Greater Vancouver Regional District, Capital Regional District and City of Nanaimo are all actively engaged in strategic planning processes for their areas. The Round Table supports these and similar processes for planning future growth and development; however, it is concerned that the processes are not integrated, nor are they required to take into account regional or provincial sustainability objectives.

What impact will the components of these and other individual plans have on other regions? Are the plans based on sufficient population densities to support cost-effective infrastructure development and transportation systems? Are the densities sufficient to take the development pressure off nearby agricultural and resource lands? Is the provincial government prepared to address these plans in the context of a holistic and integrated approach to growth management and transportation in the Georgia Basin? If the provincial government takes on a broader guiding role in local government planning, what criteria or objectives for growth management will apply to these individual plans?

B) Vancouver Island

Eastern Vancouver Island is experiencing rapid development concentrated along the Island Highway. A series of community development decisions are being proposed. At the same time, there is concern over the adequacy of the Island Highway and pressure to complete major reconstruction. As with the regional planning processes, the Round Table is concerned that these development decisions are not being placed within an overall framework that identifies the appropriate areas within which to target future growth and development, and transportation mechanisms to move people between these areas.

A "cities in a sea of green" approach may be appropriate for eastern

Box 6

Model Communities

In the U.S.A. a group of noted architects and designers working with the Local Government Commission developed a set of planning principles and implementation measures which have been guiding the planning for many recent development projects. These vary from renewal of inner city areas to whole new towns, to villages and infill housing projects. Known as the "Ahwahnee Principles", they read as follows:

Community Principles:

- All planning should be in the form of complete and integrated communities containing housing, shops, work places, schools, parks and civic facilities essential to the daily life of the residents.
- Community size should be designed so that housing, jobs, daily needs and other activities are within easy walking distance of each other.
- As many activities as possible should be located within easy walking distance of transit stops.
- A community should contain a diversity of housing types to enable citizens from a wide range of economic levels and age groups to live within its boundaries.
- Businesses within the community should provide a range of job types for the community's residents.
- The location and character of the community should be consistent with a larger transit network.
- The community should contain an ample supply of specialized open space in the form of squares, greens, and parks whose frequent use is encouraged through placement and design.
- Public spaces should be designed to encourage the attention and presence of people at all hours of the day and night.
- Each community or cluster of communities should have a well defined edge, such as agricultural greenbelts or wildlife corridors, permanently protected from development.
- Streets, pedestrian paths and bike paths should contribute to a system of fully-connected and interesting routes to all destinations. Their design should encourage pedestrian and bicycle use by being small and spatially defined by buildings, trees and lighting, and by discouraging high speed traffic.
- Wherever possible, the natural terrain, drainage, and vegetation of the community should be preserved with superior examples contained within parks or greenbelts.
- The community design should help conserve resources and minimize waste.
- Communities should provide for the efficient use of water through the use of natural drainage, drought tolerant landscaping, and recycling.
- The street orientation, the placement of buildings, and the use of shading should contribute to the energy efficiency of the community.

Regional Principles:

- The regional land use planning structure should be integrated within a larger transportation network built around transit rather than freeways.
- Regions should be bounded by and provide a continuous system of greenbelt/wildlife corridors to be determined by natural conditions.
- Regional institutions and services (government, stadiums, museums, etc.) should be located in the urban core.
- Materials and methods of construction should be specific to the region, exhibiting continuity of history and culture an compatibility with the climate to encourage the development of local character and community identity.

Ray Spaxman, AWA/Spaxman Consulting Ltd.
"Urban Form in a Sustainable Region", British Columbia Agricultural Land Commission Seminar, March 9, 1993.

Vancouver Island - a series of high density urban centres separated by open spaces, comprised of parks and recreation areas and forests and farmlands. Will these ad hoc development decisions achieve this vision? Or will we have a continuous strip of development all along the Island Highway?

C) Upper Fraser Valley, Squamish/Whistler and Sunshine Coast

The Upper Fraser Valley, Squamish/Whistler and Sunshine Coast areas are also experiencing rapid growth and development. As land for single family housing becomes more expensive in the Greater Vancouver area, families opt for more affordable housing (and longer commutes) further and further up the Fraser Valley. The Squamish/Whistler area and Sunshine Coast are attracting not only this type of growth, but also second and retirement home purchasers. Again, there is no overall plan for this growth and development, or the transportation mechanisms required to move people within and between these areas.

Planning and decision-making on growth management urgently needs to be taken within the context of an overall strategic plan for the Georgia Basin. Currently the responsibility for growth management in the basin as a whole is beyond the control of individual municipalities or regional districts. Until a new model of governance is in place, the provincial government is the primary authority to ensure that growth and development occurs within the broad principles of sustainability for the Georgia Basin.

Recommendation 2

The Round Table recommends that the Province of British Columbia strongly encourage urban containment, residential intensification (see Box 7), and compact community development in the Georgia Basin by:

a) implementing interim planning controls to limit urban sprawl, with priority given to the east coast of Vancouver Island and the Upper Fraser Valley, both of which are experiencing rapid population growth;

b) developing provincial guidelines for urban settlement in the basin, building on experiences in B.C., Ontario, Washington and Oregon. The guidelines would provide basic direction for local land use planning and servicing, and would:

- **focus urban development within existing communities;**
- **maintain large lot rural development in areas which are subject to development pressure;**
- **if necessary to develop outside of existing communities, ensure that new developments:**
  - **i) avoid hazardous areas (eg. unstable slopes, flood prone areas);**
  - **ii) avoid sensitive environments and productive resource areas;**

"The non-urban city doesn't work. Its characteristic form — low-density sprawl — is the urban equivalent of unrestricted clearcutting in the forest. It is...non-sustainable."
Globe and Mail editorial, "The Canadian city: a sprawling mess", May 7, 1993.

Box 7
Residential Intensification

There are many benefits to increased densities. Consider the following:

- Increased densities result in lower costs for housing. When four units of housing are built on one lot, the cost per unit declines since land costs are shared. Affordability problems are eased.
- Increased densities in urban areas ease pressure on valuable farmland and natural space. A compact city utilizes less land for housing and services (such as roads) and preserves open space (such as parks) for the enjoyment of all residents.
- Increased densities do not mean a city full of high-rises. Sharply increased densities can be achieved through a variety of forms, including duplexes, fourplexes, and street-level townhouses. When high-rises are built, they can be accompanied by parks and open space. The south False Creek neighbourhood is an excellent example of a well-planned low-rise, high density neighbourhood.
- Increased densities usually lead to livelier street life, shopping opportunities, and cultural activities in neighbourhoods — within walking distance to homes. Well-designed neighbourhoods that include opportunities for jobs can also lead to a greater sense of community and reduced crime.
- Increased densities can lead to the combined benefits of lower per capita taxes and improved services. Expensive services — such as roads, sewers, public transit, community and social services — are all more efficient when they serve compact communities rather than sprawling suburbs.

Artibise and Seelig, From Desolation to Hope: The Pacific Fraser Region in 2010, pg. 36.

iii) **provide for a range of housing (including affordable housing), community services and employment opportunities;**
iv) **have an adequate water supply, and provide for waste management to the appropriate federal and provincial standards; and**
v) **ensure adequate transportation planning is undertaken to minimize single occupancy vehicle use and encourage walking, cycling, and the use of transit.**

d) **encourage and support the development and redevelopment of model communities through legislation, technical and financial support. Priority could be given for discretionary grants under the Revenue Sharing Act or initiatives under the new B.C. 21 program to communities in the basin that actively pursue compact urban development based on the principles of sustainability (integrating environmental, social and economic considerations);**

e) **implement the Commission on Housing Options[24] recommendations where these support sustainable and compact community development and redevelopment.**

4.3 COMPREHENSIVE TRANSPORTATION PLANNING

Transportation decisions have profound impacts on urban form and settlement patterns. Urban population densities are crucial to cost-effective transportation planning.

Is the provincial government developing a comprehensive transportation plan for the Georgia Basin that considers the appropriate population densities? Are the various local and regional planning processes currently underway considering the densities that are required to support an efficient transit system? Is the provincial government actively consulting with the affected municipalities and regional districts, and with the public, who will ultimately use and pay for those transportation systems?

Participants at the Nanaimo workshop voiced clear concerns about the need to integrate land-use and transportation planning through such mechanisms as a comprehensive growth management act or a regional transportation authority. Until such a mechanism can be put in place through the review of planning and governance structures, several significant steps can be taken by the province to encourage appropriate transportation planning and to encourage more responsible travel behaviour on the part of individuals. The recommendations in this section are meant to demonstrate intent and leadership; more comprehensive and long-term measures must be addressed in the context of the longer-term actions recommended earlier in this report.

Recommendation 3

The Round Table recommends that the Province of British Columbia demonstrate leadership in transportation planning and management by:

a) integrating existing transportation plans with those planning processes currently underway (e.g. GVRD, CRD) to ensure the efficient movement of people and goods throughout the basin, and to destinations outside of the basin, integrating vehicle, ferry, rail and air transportation systems;

b) providing road and highway improvements where these are essential to support and enhance the economy of the Georgia Basin, with emphasis on access to port and airport gateways, but discourage (through demand management and access controls) single occupancy vehicle use of these improvements;

c) applying a full range of demand management measures to reduce the use of single occupancy vehicles for unnecessarily frequent short trips and for daily commuting;

d) supporting user pay, road pricing, and full-cost accounting principles for all transportation systems, recognizing the need to build into user pay schemes measures to mitigate economic hardship for low income residents;

e) shifting subsidies from private motor vehicles to encourage public transport;

f) reviewing the results of the Transport 2021 (GVRD/MOTH) and Transport 2010 (CRD/MOTH) projects and supporting those that support the principles of sustainability within the context of the Georgia Basin as a whole; and

g) **encouraging and supporting the development and redevelopment of communities designed to reduce the need for vehicle transportation.**

Recommendation 4
To ensure a proactive strategy for transportation planning and linkages with Washington State, the Round Table recommends that a bilateral mechanism similar to the B.C./Washington State Environmental Accord be developed to consider regional transportation issues such as ferry linkages, and transportation rail links between Seattle and Vancouver.

4.4 ENVIRONMENTAL PROTECTION AND MANAGEMENT IN THE GEORGIA BASIN

Workshop participants clearly identified water, air, and land pollution and preservation issues as requiring urgent attention if the Georgia Basin is to sustain its natural environment and quality of life. While all environmental issues are important, given the tight budgets of all levels of government and the increasing tax burden, it is imperative that we tackle the most important issues first and commit to dealing with others over an established time frame.

In the absence of complete information about the ecological consequences and a full understanding of the range of issues facing the basin, it is difficult to assess the overall priority and timeframe for action on environmental issues. Is the treatment of Victoria's sewage more important to the overall environmental quality of the Georgia Basin than secondary treatment of sewage discharged to the lower Fraser River? What about the risk of oil tanker spills in the Strait of Juan de Fuca? Or air quality? Or protecting endangered species? Solutions to each problem may have significant costs. What are the priorities and timetables for action?

Environmental issues in the Georgia Basin are often debated out of context to each other. Issues may be addressed independently, and without reference to the cumulative impact of activities, or the degree of impact in relation to other environmental issues. Environmental debates are often engaged without the benefit of the best scientific information available, and if the information does exist, it may be ignored. The analysis of environmental issues and their comparative risks is not being carried out, nor is it being debated or discussed with the public.

Workshop participants identified the need to obtain and encourage the use of the best information available, and to incorporate this information , together with community values and goals, into our decision-making processes. There is also a need to adopt the precautionary approach to environmental management, which strives to anticipate and prevent potential environmental degradation.

In 1990, Washington State completed an environmental issue identification, risk assessment and public priority setting exercise called "Environment 2010". As a result, Washington State appears to have a better public sense of its priorities for action, and the B.C. environmental issues affecting their state - a necessary prerequisite to discussing bilateral issues and concerns.

In B.C., the public does not appear to be well-informed, and has a limited sense of the overall environmental issues and priorities. B.C. residents also do not have an understanding of the Washington State environmental issues that are affecting the province.

Some steps are being taken - the Fraser River Basin Management Program has launched a process for identifying priorities for action on sustainability issues in the Fraser River, the largest river entering the Georgia Basin. The provincial Coastal Resource Management Strategy Project is also taking an integrated approach to addressing priorities and managing resources on a broader, cross-jurisdictional basis. The recently released "State of the Environment Report for British Columbia" will also help to raise public awareness of environmental issues and priorities.

The B.C./Washington State Environmental Cooperation Agreement, signed in May, 1992, provides a bilateral mechanism for integrated and coordinated action on environmental matters of mutual concern and interest (eg. regional air quality, groundwater management).

With the recent publication of the State of the Environment Report, and bilateral issues being identified by the Environmental Cooperation Council, B.C. is well positioned to take the next steps to set environmental goals and timetables for action in the Georgia Basin.

Recommendation 5
The Round Table recommends that the British Columbia/Washington State Environmental Cooperation Council continue the work being carried out under the Environmental Cooperation Agreement, as the Council provides a vital forum for regional cooperation on environmental issues.

Recommendation 6
Recognizing the number and urgency of environmental issues facing the Georgia Basin, the Round Table recommends that it be mandated to organize and facilitate a public dialogue, with expert assistance, to set environmental goals and timetables for action in the Georgia Basin.

The public dialogue would be organized in cooperation with the Provincial Ministry of Environment, Lands, and Parks, and the Federal Department of the Environment, and Department of Fisheries and Oceans, and would involve the active participation of local governments and communities within the basin.

It is further recommended that Washington State environmental experts and public groups be included in the dialogue of issues, to assist with identifying bilateral issues, and to exchange information.

An outline of a potential process for setting environmental priorities and timetables for action is provided in Box 8.

4.5 ENERGY

As the population of the region increases, the impacts of increased energy use and development will become an important issue. Increases in industrialization, urbanization, and automobile dependency will call for a shared responsibility among individuals, industry, and levels of govern-

Box 8
Environmental Issues in the Georgia Basin: Setting Values, Goals and Timetables for Action

Suggested process:

1. Identify and list Georgia Basin environmental issues, from a B.C. perspective, using Nanaimo Workshop results and State of the Environment Report for British Columbia.
2. B.C./Washington State Environmental Cooperation Council to identify and confirm bilateral issues.
3. Convene a panel of technical experts to conduct a risk-assessment and to scope issues, based on preset criteria (e.g., urgency, risk to human health, risk to environment, irreversibility, etc.).
4. Engage in public consultation processes to provide the public with the experts' information and assessment, and to elicit the public's values and concerns.
5. Assign costs to options (could be best guess estimate, with a range, or ranked as high- medium- or low-costs).
6. Bring experts' scoping of issues and public values together, and develop tentative lists of goals and timetables for dealing with environmental issues in the Georgia Basin.
7. Bring together the public and experts in a forum to review and revise issues.
8. Present results in a public report to government.
9. Domestic issues to be handed over to appropriate government agency for action; bilateral issues to be referred to Environmental Cooperation Council.

ment to improve energy efficiency and conservation.

However, as noted earlier, conservation alone is not likely to meet future needs.

New energy supply sources will have environmental, social, and economic impacts far outside of the Georgia Basin. Both sides of the border will face similar energy demands. If one side pursues an active energy saving and environmentally conscious strategy, and the other side does not, the result may be counterproductive. Thus, energy demands and source supply considerations must be coordinated bilaterally. Where appropriate, energy planning should be carried out with reference to the continent as a whole, as energy use and export issues extend well beyond the two immediate jurisdictions of B.C. and Washington State. Alternative energy technologies, full-cost accounting practices, and careful monitoring of energy use and exports also need to be considered.

Recommendation 7
The Round Table recommends that the B.C. Energy Council be directed to review and provide input into transportation and land-use plans that are expected from the GVRD, CRD, and provincial government, to ensure these plans promote energy conservation and efficiency, and thereby reduce energy consumption.

Recommendation 8
Bilateral coordination of energy planning and conservation should be undertaken through the British Columbia/Washington State Energy Cooperation Agreement.

4.6 ECONOMY

In the Georgia Basin of the future, the development of economic policy must be directed at:

- guiding the economy toward sustainability, and
- helping to restructure the economy toward value-added industries and knowledge - intensive occupations, to help shape an economy that meets social needs and the principles of environmental stewardship.

A significant shift in our current approach will be required to promote a longer-term transformation of the basin's economy.

A major concern expressed by workshop participants and stakeholders was that the basin's economic benefits were not being dispersed to other regions of the province. Unfortunately, there do not appear to be any quick or easy mechanisms to effectively distribute the basin's economic benefits.

Recently, the Round Table attempted to address this issue in the discussion paper, *An Economic Framework for Sustainability*. The paper proposes a number of strategies for review and comment.

The key to any successful set of policies will be a strong transportation and communication links between Vancouver and other regional centres to ensure the efficient flow of goods, people, and information. The comprehensive transportation planning recommended earlier in this report will be crucial to establishing these links.

Recommendation 9

The Round Table recommends that the provincial government consider the strategies proposed in the discussion paper, *An Economic Framework for Sustainability* as potential models for dispersing economic benefits from within the Georgia Basin to outlying areas of the province.

A number of organizations have been formed in recent years to facilitate economic cooperation on a bilateral basis.

The Pacific Northwest Economic Partnership (PNEP) brings together representatives from government, business, development groups, and the universities to facilitate greater economic participation in the region. PNEP has been instrumental in the signing of B.C. - Washington - Oregon agreements in biotechnology, aquaculture, aerospace and environmental technology.

State and provincial legislators from Northwest states, British Columbia and Alberta have organized the Pacific Northwest Economic Region (PNWER). This partnership is designed to enhance the overall competitiveness of the region in international and domestic markets. PNWER has begun work in the following fields: environmental technology, building a global tourism market, adding value to regional forest resources, recycling, workforce training strategy, and linking the region's institutions of higher learning through telecommunications.

The Pacific Corridor Enterprise Council (PACE) is a private sector, non-profit organization of businesses and cultural groups that promote

growth of businesses that deal with specific cross-border trade problems.

These existing bilateral mechanisms for facilitating economic cooperation appear to be working well.

Recommendation 10
The Round Table recommends that the government continue to use existing bilateral mechanisms (e.g. PNWER, PNEP) to facilitate economic cooperation, and recommends these mechanisms be expanded as new joint trade and development opportunities arise.

4.7 SOCIAL WELL-BEING

The Round Table believes the proposed new model for governance and planning for sustainability discussed earlier in this chapter will address many of the social equity issues facing the Georgia Basin.

Growth management planning can provide the basin's residents with opportunities to more effectively meet their social and other needs through improved access to and participation in the decision-making process, and integration of social "quality of life" considerations into the design and development of their communities.

As noted earlier, the development of a new process of governance and growth management strategies for the basin are expected to take several years to complete. In the interim, steps can be taken to recognize the importance of social interests and values to the economy and to the environment, and to encourage regional collaboration on social issues.

Recommendation 11
The Round Table recommends that steps be taken within the existing legislative framework to strengthen social planning, by clearly defining and incorporating a mandate for considering social factors in local planning for growth and development, and improving opportunities for public participation in the planning process.

Recommendation 12
The Round Table recommends that until there is an infrastructure in place to integrate social planning, the Provincial Government, Regional Districts, municipalities and community services sector develop a coordinated approach to regional social planning in the Georgia Basin.

4.8 PUBLIC AWARENESS AND EDUCATION

A major focus and priority of the Georgia Basin Initiative must be a broad-based public awareness and education program. Nanaimo workshop participants, and the Round Table, believe that without such a program sustainability in the basin will not be achieved.

The public must be actively involved and have input into creating the vision of the future of the Georgia Basin. The public must also be made aware of the environmental, economic, and social issues that are threatening the quality of life and sustainability of the basin, and convinced of the urgent need to act. Through knowledge, residents must be empowered to begin the transformation in attitudes and behaviours that will be required to achieve sustainability (see Box 9). Achieving success will require a

multi-faceted approach - one that involves individuals, organizations, and governments in partnerships.

The Round Table recognizes that many community-based processes are already focusing residents attention on sustainability and growth management issues (eg. CRD, GVRD, Imagine Nanaimo). The recommended awareness and education strategy is intended to link with and build on these processes.

Recommendation 13

The Province of B.C., in consultation with the Round Table and other stakeholders, should plan and execute a multi-faceted public awareness and education program designed to:

- **heighten the public's awareness that environmental, economic, and social pressures are threatening the quality of life and sustainability of the Georgia Basin, and that immediate action is required;**
- **outline a vision of a sustainable Georgia Basin of the future;**
- **inform residents of the Georgia Basin Initiative, and solicit public involvement in developing and implementing strategies to achieve a sustainable Georgia Basin;**
- **explain and illustrate the principles of sustainability, and the interdependence of the environment, economy, and social well-being, and heighten understanding in the importance of sustainability to our vision of the basin's future;**

Box 9
The Steps in Educating People to Become Contributors to Sustainability

Sustainability is a complex idea. Understanding sustainability requires some knowledge of environmental, economic, and social issues, and how these issues are interrelated. Learning to put sustainability principles into practice every day is a profound, life-changing process that must take place in gradual stages to become a permanent, life-long commitment.

The steps each person will need to take to become a contributor to sustainability are:

- Become aware of sustainability as a new idea that may provide solutions to chronic environmental, economic, and social problems.
- Become convinced that sustainability is an important and achievable goal, on a personal, community, provincial, and global level.
- Gain an understanding of sustainability and how the elements of the environment, the economy and our social system are interconnected.
- Make appropriate lifestyle changes that contribute to sustainability, such as practicing the "Three R's" (reduce, reuse, recycle) at home and in the workplace, changing transportation and consumption habits, minimizing the use of toxic substances, using non-renewable resources conservatively, and pursuing life-long learning.
- Develop skills in critical analysis and learn to participate in consensus-based decision-making in the community, schools, workplace, and other settings.
- Take the initiative to broaden work skills needed to fully participate in a sustainable economy.
- Learn to see issues from a global, long-term perspective, rather than only a narrow, self-interested perspective, and become an active agent for change by influencing others to do the same.

Towards Sustainability: Learning for Change, pg. 53

"The immediate goal of (an awareness and education) strategy is to influence today's citizens and decision-makers to take action toward sustainability now. The long-term goal is to foster attitudes and values in the next generation that will lead to widespread recognition and use of sustainability principles in the future."
"Towards Sustainability: Learning for Change." pg. 40

- **broaden community understanding of the need for growth management strategies and a governance model that can address issues of sustainability, and generate sufficient public input and support to ensure that the objectives of the model will be achieved;**

- **increase public participation in planning and decision-making on managing for sustainability.**

Recommendation 14
The Round Table recommends that the provincial government sponsor a joint forum with Washington State to:

a) build public and community support for the Georgia Basin Initiative;

b) identify issues that require bilateral cooperation; and

c) build and seek consensus on the future vision of the Georgia Basin.

Recommendation 15
The Ministry of Education should encourage and provide funding for schools within the Georgia Basin to develop curriculum units that reflect local issues and concerns related to the sustainability of the Georgia Basin.

4.9 Coordination and Funding for Implementation

The recommendations made in this report impact on and cut across a number of different provincial government ministries and agencies. As a result, the Round Table believes that one ministry or agency should be tasked with overseeing and coordinating implementation of the recommendations.

The Round Table is further concerned that, to ensure the successful implementation of these recommendations, the various ministries assigned responsibility for implementing specific recommendations or the overall task of coordination must be adequately resourced to carry out the tasks. Fore some tasks, such as the review of planning and governance models, and the environmental priority and timetable setting, funding should also be provided, to ensure the various stakeholder groups can fully participate in the process, and can make a pro-active and meaningful contribution to the process and the outcome.

Recommendation 16
The Round Table recommends that one provincial government ministry or agency be assigned lead responsibility for coordinating the implementation of the recommendations contained in this report.

Recommendation 17
The Round Table further recommends that ministries or agencies of the provincial government that are assigned responsibility for implementing specific recommendations, or coordinating the overall implementation of the report, be adequately resourced to carry out the tasks, including funding to ensure the appropriate stakeholder groups can participate in the process in a pro-active and meaningful way.

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APPENDIX 1

Participants of the Georgia Basin Initiative Workshop, Nanaimo, B.C.
January 14 - 15, 1993

Group 1: Participants
Hon. Robin Blencoe
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Clifford Scotton
Jamie Alley
Bob Harkins
Glen Leicester
Terry Knight
Jerry Berry
Richard Taylor (Facilitator)
Petra White (Notetaker)

Group 2: Participants
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Gerry Armstrong
Jerry Fletcher
David Harrison
Tony Dorcey
Susan Anderson
Art Cowie
Debra Vogt
Tom Hutton
Patrick Moore (Facilitator)
Gwenda Laughland (Notetaker)

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Lynn Hunter
Bill Holdem
Josef C. Mueller
Gerry Walter
Trevor Chandler
Kathy Fletcher
Stephen Owen
Jamie Brennan
John Rich
Richard Mulcaster (Facilitator)
Parminder Parmar (Notetaker)

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Debbie Ianson
Randall Lewis
Joy Leach
David McLean
John Montgomery
Bob Bose
Nancy McKay
Ben Marr (Facilitator)
Sophie Megalos (Notetaker)

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Ann Hillyer
Dick Gathercole
Julia Atkins
Bill Ellis
Hon. John Cashore
Ron Hagan
Mary MacGregor
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Ann Rowan (Notetaker)

Group 6: Participants
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David Stupich
Kathy Sanderson
Bob Mason
Hon. David Zirnhelt
Betty Toporowski
John Davis
Walter Hardwick
Bob Simpson
Julie Glover
Al Ferguson (Facilitator)
Denis O'Gorman (Notetaker)

Group 7: Participants
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Lucille Pacey
Charles Kelly
Jim Anderson
Grant McRadu
Ernie Yacub
Maureen Hedley
Graham Dinsdale
Cynthia Hawksworth (Facilitator)
Rob Vaterlechner (Notetaker)

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Gibby Jacob
Tom Shortridge
Michael Moore
Mary Ashley
Don Olsen
Don Alper
Wayne Gorrie
Dave Thompson (Facilitator)
Monica Wosilius (Notetaker)

Group 9: Participants
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Irene Frith
Diane Cragg
Nicholas Vincent
Carlos Achadinha
David Marshall
Shawne Chang
Frank Norris
Gordon McIntosh (Facilitator)
James Hansen (Notetaker)

Group 10: Participants
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Frank Rhodes
Geoffrey Ballard
Gordon Campbell
Bob Ellis
Carol Martin
Kirk Miller
Coro Strandberg (Facilitator)
Shauna Brail (Notetaker)

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Eric Martin
Hugh Millar
Gary Paget
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Darlene Anderson (Notetaker)

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Jim Connor
Keith Jardine
Gordon Denford
Bill Woodall
George West
Patricia Woodward
Bruce Agnew
Dick Butler (Facilitator)
Joe Truscott (Notetaker)
Clair Davis (Recorder)

Group 14: Participants
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Dale Lovick
Doug Little
Teri Dawe
Joe Sulmona
Mike Meyer
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David Turner
Beth Stewart
Pam Devito (Facilitator)
Catherine Panter (notetaker)

APPENDIX 2

MODELS OF GOVERNANCE

NAME	GEORGIA BASIN REGIONAL COUNCIL
CONCEPT	Creation of a Georgia Basin membership association or federation of all municipal governments and regional districts in the region. The Regional Council would derive its power and authority from participating municipal governments and regional districts and from provincial legislation.
BACKGROUND	There are several examples of this approach. In Washington State, the Puget Sound Regional Council was created in October 1991, replacing the Puget Sound Council of Governments. The P.S.R.C. is the regional planning and decision-making body for growth and transportation issues in King, Kitsap, Pierce and Snohomish Counties. The Regional Council was preceded by vigorous debate on the Council's roles and responsibilities and, as formed, it is intended to provide a setting for the cooperative decision-making necessitated by growth management and transportation demand management laws passed by the State legislature. In Australia, there are also a growing number of regional organizations of councils (ROCs).
GOVERNING BODY	The Georgia Basin Regional Council would have a General Assembly composed of elected politicians appointed by municipal governments and regional districts in the Georgia Basin. The Assembly would meet two or three times per year. An Executive Board, appointed by the General Assembly, would meet monthly. To ensure that this model did not result in a net increase in government, and that it had the potential to work effectively, it would have to be established after a review of the size and number of existing municipal governments and regional districts in the Georgia Basin.
DUTIES/POWERS/ JURISDICTIONS	The G.B. Regional Council would have clear powers to prepare regional plans, to ensure the consistency of local and regional district plans, and to regulate and enforce the goals and standards established in its terms of incorporation. The delivery of services would be by existing governments. The Georgia Basin Regional Council would also be mandated to carry out the critical task of providing technical assistance to members and of maintaining a regional database. The latter would also report on and forecast economic, social, transportation and environmental conditions in the region.
REVENUE SOURCES	The Regional Council would derive revenue from member governments on a per capita levy basis and from the Province in the form of grants.

NAME	GEORGIA BASIN REGIONAL GOVERNMENT
CONCEPT	Creation of a new regional government with policy making authority derived from provincial legislation. The Georgia Basin Regional Government would replace regional districts in the Georgia Basin and, in addition to new powers that may be granted, assume the powers and responsibilities of the districts.
BACKGROUND	Toronto (1953) and Winnipeg (1961) created "metropolitan" governments. Both later evolved. In the Toronto-centred region, in addition to the Regional Government of Metropolitan Toronto, an "Office for the Greater Toronto Area (OGTA)" was established in 1988 under a deputy minister. Its task was to attempt to obtain consensus among five regional governments on a long-term planning vision and on cross-regional issues such as solid waste disposal and commuter transportation. In Winnipeg, thirteen municipalities were abolished and replaced with Unicity (1971), a one tier government for the region. In Europe, the Netherlands is currently considering creating a powerful new regional government in Rotterdam, coupled with "local communities." The proposal involves the abolition of a layer of government, the creation of an obvious metropolitan region responsible for region-wide issues, and leaving the delivery of local services with a number of local communities of approximately equal size. The Dutch argue that such reforms would disentangle functions, promote accountability and establish a more cost-effective framework for the provision of services. In the United States, two innovative regional governments were created recently: in the Miami-centred region (Metro-Dade, 1986); and Portland Metropolitan Service District (1986). Both bodies are governed by politicians elected directly.
GOVERNING BODY	A directly elected body, elected by "districts," is appropriate. The number of representatives can vary, but given the size of the region an elected body in the order of 30 members seems reasonable.
DUTIES/POWERS/ JURISDICTIONS	With a mandate derived from direct election from the entire Georgia Basin, the Georgia Basin Regional Government could be empowered to develop and implement a regional plan that covered transportation, economic development, water supply and delivery, sewage disposal, social services (including housing), and police and fire protection. The G.B.R.G. would also be required to audit the state of sustainability in the Basin and present regular reports to both the province and municipal governments. A key challenge in this model is the development of a rational and workable division of powers among the levels of government - provincial, regional, and local.[22]
REVENUE SOURCES	The Georgia Basin Regional Government would have the authority to tax residents of the region directly.

NAME	GEORGIA BASIN MINISTRY
CONCEPT	Creation of a new provincial government department that focused on the Georgia Basin and assumed the responsibilities of existing ministries for activities in critical areas in the region.
BACKGROUND	In Manitoba, the province has both a Department of Municipal Affairs and a Department of Urban Affairs. The former deals with the entire province except for Winnipeg; the latter is responsible for Winnipeg. In Ontario, the "Office for the Greater Toronto Area," under the direction of a Deputy Minister, is responsible for coordinating provincial activities for five regional governments. Also noteworthy is the fact that a recent Commission on Planning and Development Reform in the Province of Ontario has recommended the establishment of a coordinating committee for planning issues at the Deputy Minister level (the Interministerial Planning Committee, or IPC - see box on next page). Notably, the proposal for a new ministry was recommended by one group at the Georgia Basin Initiative Workshop in January in Nanaimo.
GOVERNING BODY	A new ministry would require a reorganization of existing duties and responsibilities within the province and the appointment of a Minister.
DUTIES/POWERS/ JURISDICTIONS	The key element in creating a new ministry is to ensure there is no increase in bureaucracy but, rather, a streamlined and coodinated approach. This will require a realignment and perhaps the reduction of existing ministries. The new ministry, to be effective, would require as a minimum the power to deal with major transportation (highways, public transit, ferries) issues, infrastructure planning (sewers, water), and environmental standards. The ministry could also play a critical role in monitoring and forecasting in the areas of environmental, demographic, economic and social issues.
REVENUE SOURCES	In addition to spending provincial tax dollars derived from general revenues, the new ministry could be given powers to institute user fees (such as road pricing) tied to achieving the general goals of sustainability in the region.

NAME	GEORGIA BASIN COMMISSION
CONCEPT	A special purpose body that would implement and administer/regulate policies established by the province, or jointly by the province and municipal governments.
BACKGROUND	The most notable example of this implementation tool is B.C.'s Agricultural Land Commission, established by provincial legislation (Bill #42) in 1973. It has been called "a skillful, logical, bold and strong" move (*Environments*, 14(3), 1982) and has received favourable attention throughout North America and Europe. Other jurisdictions have developed similar tools to deal with particular issues. A well-known case is the South Coast Air Quality Management District which covers metropolitan Los Angeles. This body is responsible for a comprehensive program to improve air quality, and its powers are derived from legislation. In the San Francisco region, a nine county regional commission is currently being created.
GOVERNING BODY	A variety of options are available, but the most obvious is that Commission members would be appointed directly by the province or jointly by the province and municipalities. The legislation could set conditions on the appointments, such as stipulating geographic or sector representation. The Commissioners would have powers to hire staff to administer the legislative regulations. The legislation could also establish participation processes to ensure that the public was informed of and involved in implementation.
DUTIES/POWERS/ JURISDICTION	The mandate of the Georgia Basin Commission would cover the entire region. Within this jurisdiction, the Commission would have powers to enforce regulations set out in its legislative mandate. The key issue is, of course, the mandate: it could include powers over land-use designation, transportation planning, environmental standards, and infrastructure development. The legislation would have to clearly delineate the relationship of the Commission to provincial powers and the powers of municipal government. The Commission would not be directly involved in the delivery of services but, rather, in ensuring that service delivery was carried out in a manner appropriate to the terms set out in its legislative mandate.
REVENUE SOURCES	The Commission would not have taxing authority but obtain its operational budget directly from the province or jointly from the province and from municipalities. (Notably, in 1990-91, the budget for the Agricultural Land Commission was $1,289,764.)

NAME	GEORGIA BASIN SUSTAINABILITY ACT
CONCEPT	A provincial act that would directly address the issues faced by the Georgia Basin through such mechanisms as setting goals and targets, encouraging or mandating planning, and enforcing standards.
BACKGROUND	This approach - commonly referred to as growth management legislation - has become quite common in the United States. Thirteen states have initiated growth management programs since 1970, including in 1990 the State of Washington. Based on this extensive experience, this approach can be carefully developed to take advantage of the many lessons learned during the past two decades.
GOVERNING BODY	The Act can be administered through an existing or new government ministry. In addition, it is common to create an appeals procedure that decides on challenges to the administrative agency in an efficient and neutral manner. In Washington State, a "public hearings board" has been established. In a similar vein - although outside the context of a growth management act - the Province of Ontario has an appointed "Ontario Municipal Board" to review local decisions on land-use.
DUTIES/POWERS/ JURISDICTIONS	In terms of duties and powers, one of three approaches can be taken. The first is a cooperative planning approach where the provincially established goals and standards are implemented by municipal governments and regional districts on a voluntary basis. Assuring local/regional consistency with provincial goals and standards is achieved through incentive programs such as funding and technical assistance and enhanced local powers. A second approach is conjoint or shared planning where municipal government and regional districts implement provincial standards and goals. Penalties and mandates are the primary means of assuring local plan consistency with provincial standards and goals. (This is the approach taken in Washington State.) The third approach is preemptive or regulatory planning where the province preempts or repeals certain powers of municipal governments in areas deemed of more than local importance. Whatever approach is taken, the key element of provincial legislation, which in effect transfers growth policy authority - in some degree - from municipal to provincial government, is to address the inability or unwillingness of local government to deal adequately with issues that transcend municipal boundaries.
REVENUE SOURCES	Provincial legislation would not necessarily create new taxing authorities and existing municipal government and regional districts would continue to tax and deliver services. Depending on the approach taken, however, provincial grants and/or taxing powers could be altered to ensure compliance with provincial goals and standards.

NAME	GEORGIA BASIN MANAGEMENT PROGRAM
CONCEPT	A policy coordinating body that would strive to harmonize the policies of all government agencies operating in the Georgia Basin. The G.B.M.P. would be an educational and advisory agency; it would not have powers to regulate or implement policies. This approach of interjurisdictional cooperation is based on the view that no level of government should have control of policy in the Georgia Basin. Administration of the region is a shared responsibility and each level of government must strive to perform its role in partnership with others.
BACKGROUND	The most relevant example of this approach is the Fraser Basin Management Program established in 1992 by federal, provincial and local governments in the Fraser River Basin. A similar program was undertaken by federal, provincial and local governments in Winnipeg between 1981-1991, called the Winnipeg Core Area Initiative. While the two examples are very similar in terms of their goals, the "governing agencies" are very different. The Fraser Basin Board is a unique, multi-party, appointed board of 19 persons. The Core Area Initiative Board was composed of senior politicians representing the three governments.
GOVERNING BODY	While a variety of options is possible, the most obvious is a multi-party board similar to that developed by the Fraser Basin Management Program. This board consists of three members each appointed by the three levels of government and the balance appointed by the original signatories to the agreement following principles of representation based on geography, knowledge, etc.
DUTIES/POWERS/ JURISDICTIONS	The Georgia Basin Management Program would mandate the governing board to provide leadership in developing a region-wide management program; to recommend on priorities for programs and budgets; to influence and guide the coordination and integration of the activities of governments and the private sector; and to audit the state of sustainability of the Basin. It is important to note that while the Georgia Basin Management Program Board will make recommendations regarding sustainability in the Basin, it is the respective governments who will decide which initiatives will be carried out and in what order of priority.
REVENUE SOURCES	The Management Program would receive grants from participating governments in a pre-arranged, shared basis. (Notably, in 1992-93, the Fraser Basin Management Board has a budget of $720,000.)